contain recommendations for remedial work when appropriate, and will be transmitted through the Division Engineer for review and to HQDA (DAEN-CWE) WASH DC 20314 for review and approval. For structures incurring no damage a simple statement to this effect will be all that is required in the report, unless seismic instrumentation at the project is activated. (See paragraph (h)(4) of this section.)

(g) Training. The dam safety training program covered by paragraph 6 of ER 1130-2-419 should include post-earthquake inspections and the types of damage operations personnel should

look for.

(h) Responsibilities. (1) The Engineering Divisions of the District offices will formulate the inspection program, conduct the post-earthquake inspections, process and analyze the data of instrumental and other observations, evaluate the resulting condition of the structures, and prepare the inspection reports. The Engineering division is also responsible for planning special instrumentation felt necessary in selected structures under this program. Engineering Division is responsible for providing the training discussed in paragraph (g) of this section.

(2) The Construction Divisions of the District offices will be responsible for the installation of the earthquake instrumentation devices and for data collection if an earthquake occurs during

the construction period.

(3) The Operations Division of the District offices will be responsible for the immediate assessment of earthquake damage and notifying the Chief, Engineering Division as discussed in paragraphs (f)(1) and (2). The Operations Division will also be responsible for earthquake data collection after the construction period in accordance with the instrumental observation programs, and will assist and participate in the post-earthquake inspections.

(4) The U.S. Geological Survey has the responsibility for servicing and collecting all data from strong motion instrumentation at Corps of Engineers dam projects following an earthquake occurrence. However, the U.S. Army Waterways Experiment Station (WES) is assigned the responsibility for analyzing and interpreting these earthquake data. Whenever a recordable earthquake record is obtained from seismic instrumentation at a Corps project, the Division will send a report of all pertinent instrumentation data to the Waterways Experiment Station, ATTN: WESGH, P.O. Box 631, Vicksburg, Mississippi 39180. The report on each project should include a complete description of the locations and types of instruments and a copy of the instrumental records from each of the strong motion machines activated. (Exempt from requirements control under paragraph 7-2v, AR 335-15).

(5) The Engineering Divisions of the Division offices will select structures for special instrumentation for earthquake effects, and will review and monitor the data collection, processing, evaluating, and inspecting activities. They will also be specifically responsible for promptly informing HQDA (DAEN-CWE) WASH DC 20314, when evaluation of the condition of the structure or analyses of the instrumentation data indicate the stability of a structure is questionable. (Exempt for requirements control under paragraph 7-2o, AR 335-15.)

(6) Division Engineers are responsible for issuing any supplementary regulations necessary to adapt the policies and instructions herein to the specific conditions within their Division.

(i) Funding. Funding for the evaluation and inspection program will be under the Appropriation 96X3123, Operations and Maintenance. General. Funds required for the inspections, including Travel and Per Diem costs incurred by personnel of the Division office or the Office, Chief of Engineers, will be from allocations made to the various projects for the fiscal year in which the inspection occurs.

[44 FR 43469, July 25, 1979. Redesignated at 60 FR 19851, Apr. 21, 1995]

§222.5 Water control management (ER 1110-2-240).

(a) Purpose. This regulation prescribes policies and procedures to be followed by the U.S. Army Corps of Engineers in carrying out water control management activities, including establishment of water control plans for Corps and non-Corps projects, as required by Federal laws and directives.

- (b) *Applicability.* This regulation is applicable to all field operating activities having civil works responsibilities.
- (c) References. Appendix A lists U.S. Army Corps of Engineers publications and sections of Federal statutes and regulations that are referenced herein.
- (d) Authorities—(1) U.S. Army Corps of Engineers projects. Authorities for allocation of storage and regulation of projects owned and operated by the Corps of Engineers are contained in legislative authorization acts and referenced project documents. These public laws and project documents usually contain provisions for development of water control plans, and appropriate revisions thereto, under the discretionary authority of the Chief of Engineers. Some modifications in project operation are permitted under congressional enactments subsequent to original project authorization. Questions that require interpretations of authorizations affecting regulation of specific reservoirs will be referred to CDR USACE (DAEN-CWE-HW), WASH DC 20314, with appropriate background information and analysis, for resolution.
- (2) Non-Corps projects. The Corps of Engineers is responsible for prescribing flood control and navigation regulations for certain reservoir projects constructed or operated by other Federal, non-Federal or private agencies. There are several classes of such projects: Those authorized by special acts of Congress; those for which licenses issued by the Federal Energy Regulatory Commission (formerly Federal Power Commission) provide that operation shall be in accordance with instructions of the Secretary of the Army; those covered by agreements between the operating agency and the Corps of Engineers; and those that fall under the terms of general legislative and administrative provisions. These authorities, of illustrative examples, are described briefly in Appendix B
- (e) Terminology: Water control plans and reservoir regulation schedules. (1) Water control plans include coordinated regulation schedules for project/system regulation and such additional provisions as may be required to collect, analyze and disseminate basic data, prepare detailed operating instructions, assure project safety and

carry out regulation of projects in an appropriate manner.

(2) The term "reservoir regulation schedule" refers to a compilation of operating criteria, guidelines, rule curves and specifications that govern basically the storage and release functions of a reservoir. In general, schedules indicate limiting rates of reservoir releases required during various seasons of the year to meet all functional objectives of the particular project, acting separately or in combination with other projects in a system. Schedules are usually expressed in the form of graphs and tabulations, supplemented by concise specifications.

- (f) General policies. (1) Water control plans will be developed for reservoirs, locks and dams, reregulation and major control structures and interrelated systems to comform with objectives and specific provisions of authorizing legislation and applicable Corps of Engineers reports. They will include any applicable authorities established after project construction. The water control plans will be prepared giving appropriate consideration to all applicable Congressional Acts relating to operation of Federal facilities, i.e., Fish and Wildlife Coordination Act (Pub. L. 85-624), Federal Water Project Recreation Act-Uniform Policies (Pub. L. 89-72), National Environmental Policy Act of 1969 (Pub. L. 91-190), and Clean Water Act of 1977 (Pub. L. 95-217). Thorough analysis and testing studies will be made as necessary to establish the optimum water control plans possible within prevailing constraints.
- (2) Necessary actions will be taken to keep approved water control plans upto-date. For this purpose, plans will be subject to continuing and progressive study by personnel in field offices of the Corps of Engineers. These personnel will be professionally qualified in technical areas involved and familiar with comprehensive project objectives and other factors affecting water control. Organizational requirements for water control management are further discussed in ER 1110-2-1400.
- (3) Water control plans developed for specific projects and reservoir systems will be clearly documented in appropriate water control manuals. These

manuals will be prepared to meet initial requirements when storage in the reservoir begins. They will be revised as necessary to conform with changing requirements resulting from developments in the project area and downstream, improvements in technology, new legislation and other relevant factors, provided such revisions comply with existing Federal regulations and established Corps of Engineers policy.

- (4) Development and execution of water control plans will include appropriate consideration for efficient water management in conformance with the emphasis on water conservation as a national priority. The objectives of efficient water control management are to produce beneficial water savings and improvements in the availability and quality of water resulting from project regulation/operation. Balanced source use through improved regulation should be developed to conserve as much water as possible and maximize all project functions consistent with project/system management. Continuous examination should be made of regulation schedules, possible need for storage reallocation (within existing authority and constraints) and to identify needed changes in normal regulation. Emphasis should be placed on evaluating conditions that could require deviation from normal release schedules as part of drought contingency plans (ER 1110-2-1941).
- (5) Adequate provisions for collection, analysis and dissemination of basic data, the formulation of specific project regulation directives, and the performance of project regulation will be established at field level.
- (6) Appropriate provisions will be made for monitoring project operations, formulating advisories to higher authorities, and disseminating information to others concerned. These actions are required to facilitate proper regulation of systems and to keep the public fully informed regarding all pertinent water control matters.
- (7) In development and execution of water control plans, appropriate attention will be given to project safety in accordance with ER 1130-2-417 and ER 1130-2-419 so as to insure that all water impounding structures are operated for the safety of users of the facilities and

the general public. Care will be exercised in the development of reservoir regulation schedules to assure that controlled releases minimize project impacts and do not jeopardize the safety of persons engaged in activities downstream of the facility. Water control plans will include provisions for issuing adequate warnings or otherwise alerting all affected interests to possible hazards from project regulation activities.

(8) In carrying out water control activities, Corps of Engineers personnel must recognize and observe the legal responsibility of the National Weather Service (NWS), National Oceanic and Atmospheric Administration (NOAA), for issuing weather forecasts and flood warnings, including river discharges and stages. River forecasts prepared by the Corps of Engineers in the execution of its responsibilities should not be released to the general public, unless the NWS is willing to make the release or agrees to such dissemination. However, release to interested parties of factual information on current storms or river conditions and properly quoted NWS forecasts is permissible. District offices are encouraged to provide assistance to communities and individuals regarding the impact of forecasted floods. Typical advice would be to provide approximate water surface elevations at locations upstream and downstream of the NWS forecasting stream gages. Announcement of anticipated changes in reservoir release rates as far in advance as possible to the general public is the responsibility of Corps of Engineers water control managers for projects under their jurisdiction.

(9) Water control plans will be developed in concert with all basin interests which are or could be impacted by or have an influence on project regulation. Close coordination will be maintained with all appropriate international, Federal, State, regional and local agencies in the development and execution of water control plans. Effective public information programs will be developed and maintained so as to inform and educate the public regarding Corps of Engineers water control management activities.

(10) Fiscal year budget requests for water control management activities

will be prepared and submitted to the Office of the Chief of Engineers in accordance with requirements established in Engineer Circular on Annual Budget Requests for Civil Works Activities. The total annual costs of all activities and facilities that support the water control functions, (excluding physical operation of projects, but including flood control and navigation regulation of projects subject to 33 CFR 208.11) are to be reported. Information on the Water Control Data Systems and associated Communications Category of the Plant Replacement and Improvement Program will be submitted with the annual budget. Reporting will be in accordance with the annual Engineer Circular on Civil Works Operations and Maintenance, General

(g) Responsibilities: US Army Corps of Engineers projects—(1) Preparation of water control plans and manuals. Normally, district commanders are primarily responsible for background studies and for developing plans and manuals required for reservoirs, locks and dams, reregulation and major control structures and interrelated systems in their respective district areas. Policies and general guidelines are prescribed by OCE engineer regulations while specific requirements to implement OCE guidance are established by the division commanders concerned. Master Water Control Manuals for river basins that include more than one district are usually prepared by or under direct supervision of division representatives. Division commanders are responsible for providing such management and technical assistance as may be required to assure that plans and manuals are prepared on a timely and adequate basis to meet water control requirements in the division area, and for pertinent coordination among districts, divisions, and other appropriate entities.

(2) Public involvement and information—(i) Public meeting and public involvement. The Corps of Engineers will sponsor public involvement activities, as appropriate, to appraise the general public of the water control plan. In developing or modifying water control manuals, the following criteria is applicable.

- (A) Conditions that require public involvement and public meetings include: Development of a new water control manual that includes a water control plan; or revision or update of a water control manual that changes the water control plan.
- (B) Revisions to water control manuals that are administratively or informational in nature and that do not change the water control plan do not require public meetings.
- (C) For those conditions described in paragraph (g)(2)(i)(A) of this section, the Corps will provide information to the public concerning proposed water control management decisions at least 30 days in advance of a public meeting. In so doing, a separate document(s) should be prepared that explains the recommended water control plan or change, and provides technical information explaining the basis for the recommendation. It should include a description of its impacts (both monetary and nonmonetary) for various purposes, and the comparisons with alternative plans or changes and their effects. The plan or manual will be prepared only after the public involvement process associated with its development or change is complete.
- (D) For those conditions described in paragraph (g)(2)(i)(A) of this section, the responsible division office will send each proposed water control manual to the Army Corps of Engineers Head-quarters, Attn: CECW-EH-W for review and comments prior to approval by the responsible division office.
- (ii) Information availability. The water control manual will be made available for examination by the general public upon request at the appropriate office of the Corps of Engineers. Public notice shall be given in the event of occurring or anticipated significant changes in reservoir storage or flow releases. The method of conveying this information shall be commensurate with the urgency of the situation and the lead time available.
- (3) Authority for approval of plans and manuals. Division commanders are delegated authority for approval of water control plans and manuals, and associated activities.

- (4) OCE role in water control activities. OCE will establish policies and guidelines applicable to all field offices and for such actions as are necessary to assure a reasonable degree of consistency in basic policies and practices in all Division areas. Assistance will be provided to field offices during emergencies and upon special request.
- (5) Methods improvement and staff training. Division and district commanders are responsible for conducting appropriate programs for improving technical methods applicable to water control activities in their respective Suitable training programs should be maintained to assure a satisfactory performance capability water control activities. Appropriate coordination of such programs with similar activities in other areas will be accomplished to avoid duplication of effort, and to foster desirable exchange of ideas and developments. Initiative in re-evaluating methods and guidelines previously established in official documents referred to in paragraph (e) of this section is encouraged where needs are evident. However, proposals for major deviations from basic concepts, policies and general practices reflected in official publications will be submitted to CDR USACE (DAEN-CWE) WASH DC 20314 for concurrence or comment before being adopted for substantial application in actual project regulation at field level.
- (h) Directives and technical instruction manuals. (1) Directives issued through OCE Engineer Regulations will be used to foster consistency in policies and basic practices. They will be supplemented as needed by other forms of communication.
- (2) Engineering Manuals (EM) and Engineer Technical Letters (ETL) are issued by OCE to serve as general guidelines and technical aids in developing water control plans and manuals for individual projects or systems.
- (3) EM 1110-2-3600 discusses principles and concepts involved in developing water control plans. Instructions relating to preparation of "Water Control Manuals for speicfic projects" are included. EM 1110-2-3600 should be used as a general guide to water control activities. The instructions are sufficiently flexible to permit adaptation to

- specific regions. Supplemental information regarding technical methods is provided in numerous documents distributed to field offices as "hydrologic references."
- (4) Special assistance in technical studies is available from the Hydrologic Engineering Center, Corps of Engineers, 609 Second Street, Davis, California 95616 and DAEN-CWE-HW.
- (i) Water control manuals for US Army Corps of Engineers projects. (1) As used herein, the term "water control manual" refers to manuals that relate primarily to the functional regulation of an individual project or system of projects. Although such manuals normally include background information concerning physical features of projects, they do not prescribe rules or methods for physical maintenance or care of facilities, which are covered in other documents. (References 15 and 23, Appendix A.)
- (2) Water control manuals prepared in substantially the detail and format specified in instructions referred to in paragraph 8 are required for all reservoirs under the supervision of the Corps of Engineers, regardless of the purpose or size of the project. Water Control manuals are also required for lock and dam, reregulation and major control structure projects that are physically regulated by the Corps of Engineers. Where there are several projects in a drainage basin with interrelated purposes, a "Master Manual" shall be prepared. The effects of non-Corps projects will be considered in appropriate detail, including an indication of provisions for interagency coordination.
- (3) "Preliminary water control manuals," for projects regulated by the Corps of Engineers should contain regulation schedules in sufficient detail to establish the basic plan of initial project regulation.
- (4) As a general rule, preliminary manuals should be superseded by more detailed interim or "final" manuals within approximately one year after the project is placed in operation.
- (5) Each water control manual will contain a section on special regulations to be conducted during emergency situations, including droughts.

Preplanned operations and coordination are essential to effective relief or assistance.

- (6) One copy of all water control manuals and subsequent revisions shall be forwarded to DAEN-CWE-HW for file purposes as soon as practicable after completion, preferably within 30 days from date of approval at the division level.
- (j) Policies and requirements for preparing regulations for non-Corps projects. (1) Division and district commanders will develop water control plans as required by section 7 of the 1944 Flood Control Act, the Federal Power Act and section 9 of Pub. L. 436-83 for all projects located within their areas, in conformance with ER 1110-2-241, 33 CFR part 208. That regulation prescribes the policy and general procedures for regulating reservoir projects capable of regulation for flood control or navigation, except projects owned and operated by the Corps of Engineers; the International Boundary and Water Commission, United States and Mexico; those under the jurisdiction of the International Joint Commission, United States and Canada, and the Columbia River Treaty. ER 1110-2-241, 33 CFR part 208 permits the promulgation of specific regulations for a project in compliance with the authorizing acts, when agreement on acceptable regulations cannot be reached between the Corps Engineers and the owners. Appendix B provides a summary of the Corps of Engineers responsibilities for prescribing regulations for non-Corps reservoir projects.
- (2) Water control plans will be developed and processed as soon as possible for applicable projects already completed and being operated by other entities, including projects built by the Corps of Engineers and turned over to others for operation.
- (3) In so far as practicable, water control plans for non-Corps projects should be developed in cooperation with owning/operating agencies involved during project planning stages. Thus, tentative agreements on contents, including pertinent regulation schedules and diagrams, can be accomplished prior to completion of the project.
- (4) The magnitude and nature of storage allocations for flood control or

non-Corps navigation purposes in projects are governed basically by conditions of project authorizations or other legislative provisions and may include any or all of the following types of storage assignments:

(i) Year-round allocations: Storage

remains the same all year.

(ii) Seasonal allocations: Storage varies on a fixed seasonal basis.

- (iii) Variable allocations of flood control from year to year, depending on hydrologic parameters, such as snow
- (5) Water control plans should be developed to attain maximum flood control or navigation benefits, consistent with other project requirements, from the storage space provided for these purposes. When reservoir storage capacity of the category referred to in paragraph (j)(4)(iii) is utilized for flood control or navigation, jointly with other objectives, the hydrologic parameters and related rules developed under provisions of ER 1110-2-241, 33 CFR part 208 should conform as equitably as possible with the multiple-purpose objectives established in project authorizations and other pertinent legislation.
- (6) Storage allocations made for flood control or navigation purposes in non-Corps projects are not subject to modifications by the Corps of Engineers as a prerequisite for prescribing 33 CFR 208.11 regulations. However, regulations developed for use of such storage should be predicated on a mutual understanding between representatives of the Corps and the operating agency concerning the conditions of the allocations in order to assure reasonable achievement of basic objectives intended. In the event field representatives of the Corps of Engineers, and the operating agency are unable to reach necessary agreements after all reasonable possibilities have been explored, appropriate background explanations and recommendations should be submitted to DAEN-CWE-HW for consideration.
- (7) The Chief of Engineers is responsible for prescribing regulations for use of flood control or navigation storage and/or project operation under the provisions of the referenced legislative acts. Accordingly, any regulations established should designate the division/

district commander who is responsible to the Chief of Engineers as the representative to issue any special instructions required under the regulation. However, to the extent practicable, project regulations should be written to permit operation of the project by the owner without interpretations of the regulations by the designated representative of the Commander during operating periods.

(8) Responsibility for compliance with 33 CFR 208.11 regulations rests with the operating agency. The division or district commander of the area in which the project is located will be kept informed regarding project operations to verify reasonable conformance with the regulations. The Chief of Engineers or his designated representative may authorize or direct deviation from the established water control plan when conditions warrant such deviation. In the event unapproved deviations from the prescribed regulations seem evident, the division or district commander concerned will bring the matter to the attention of the operating agency by appropriate means.

If corrective actions are not taken promptly, the operating agency should be notified of the apparent deviation in writing as a matter of record. Should an impasse arise, in that the project owner or the designated operating entity persists in noncompliance with regulations prescribed by the Corps of Engineers, the Office of Chief Counsel should be advised through normal channels and requested to take necessary measures to assure compliance.

(9) Regulations should contain information regarding the required exchange of basic data between the representative of the operating agency and the U.S. Army Corps of Engineers, that are pertinent to regulation and coordination of interrelated projects in the region.

(10) All 33 CFR 208.11 regulations shall contain provisions authorizing the operating agency to temporarily deviate from the regulations in the event that it is necessary for emergency reasons to protect the safety of the dam, to avoid health hazards, and to alleviate other critical situations.

(k) Developing and processing regulations for non-Corps projects. Guidelines concerning technical studies and development of regulations are contained in ER 1110-2-241, 33 CFR part 208 and EM 1110-2-3600. Appendix C of this regulation summarizes steps normally followed in developing and processing regulations for non-Corps projects.

(l) Water control during project construction stage. Water control plans discussed in preceding paragraphs are intended primarily for application after the dam, spillway and outlet structures; major relocations; land acquisitions, administrative arrangements and other project requirements have reached stages that permit relatively normal project regulation. With respect to non-Corps projects, regulations normally become applicable when water control agreements have been signed by the designated signatories, subject to special provisions in specific cases. In some instances, implementation of regulations has been delayed by legal provisions, contract limitations, or other considerations. These delays can result in loss of potential project benefits and possible hazards. Accordingly, it is essential that appropriate water control and contingency plans be established for use from the date any storage may accumulate behind a partially completed dam until the project is formally accepted for normal operations. Division commanders shall make certain that construction-stage regulation plans are established and maintained in a timely and adequate manner for projects under the supervision of the Corps of Engineers. In addition, the problems referred to should be discussed with authorities who are responsible for non-Corps projects, with the objective of assuring that such projects operate as safely and effectively as possible during the critical construction stage and any period that may elapse before regular operating arrangements have been established. These special regulation plans should include consideration for protection of construction operations; safety of downstream interests that might be jeopardized by failure of partially completed embankments; requirements for minimizing adverse effects on partially completed relocations or incomplete land acquisition; and the need for obtaining benefits from project storage

that can be safely achieved during the construction and early operation period.

- (m) Advisories to OCE regarding water control activities—(1) General. Division commanders will keep the Chief of Engineers currently informed of any unusual problems or activities associated with water control that impact on his responsibilities.
- (2) Annual division water control management report (RCS DAEN-CWE-16(R1)). Division commanders will submit an annual report on water control management activities within their division. The annual report will be submitted to (DAEN-CWE-HW) by 1 February each year and cover significant activities of the previous water year and a description of activities to be accomplished for the current year. Funding information for water control activities will be provided in the letter of transmittal for in-house use only. The primary objective of this summary is to keep the Chief of Engineers informed regarding overall water management activities Corps-wide, thus providing a basis to carry out OCE responsibilities set forth in paragraph (g)(4) of this section.
- (3) Status of water control manuals. A brief discussion shall be prepared annually by each division commander, as a separate section of the annual report on water control management activities discussed in paragraph (m)(2) of this section listing all projects currently in operation in his area, or expected to begin operation within one-year, with a designation of the status of water control manuals. The report should also list projects for which the Corps of Engineers is responsible for prescribing regulations, as defined in ER 1110-2-241, 33 CFR part 208.
- (4) Monthly water control charts (RCS DAEN-CWE-6 (R1)). A monthly record of reservoirs/lakes operated by the Corps of Engineers and other agencies, in accordance with 33 CFR 208.11, will be promptly prepared and maintained by district/division commanders in a form readily available for transmittal to the Chief of Engineers, or others, upon request. Record data may be prepared in either graphical form as shown in EM 1110-2-3600, or tabular

form as shown in the sample tabulation in Appendix \boldsymbol{D} .

- (5) Annual division water quality reports (RCS DAEN-CWE-15). By Executive Order 12088, the President ordered the head of each Executive Agency to be responsible for ensuring that all necessary actions are taken for prevention, control, and abatement of environmental pollution with respect to Federal facilities and activities under control of the agency. General guidance is provided in references 24 and 25, Appendix A, for carrying out this agency's responsibility. Annual division water quality reports are required by reference 24, Appendix A. The report is submitted in two parts. The first part addresses the division Water quality management plan while the second part presents specific project information. A major objective of this report is to summarize information pertinent to water quality aspects of overall water management responsibilities. The annual division water quality report may be submitted along with the annual report on water control management activities discussed in paragraph 13b above.
- (6) Master plans for water control data systems (RCS DAEN-CWE-21). (i) A water control data system is all of the equipment within a division which is used to acquire, process, display and distribute information for real-time project regulation and associated interagency coordination. A subsystem is all equipment as defined previously within a district. A network is all equipment as defined previously which is used to regulate a single project or a group of projects which must be regulated interdependently.
- (ii) Master plans for water control data systems and significant revisions thereto will be prepared by division water control managers and submitted to DAEN-CWE-HW by 1 February each year for review and approval of engineering aspects. Engineering approval does not constitute funding approval. After engineering approval is obtained, equipment in the master plan is eligible for consideration in the funding processes described in ER 1125-2-301

and engineering circulars on the annual budget request for civil works activities. Master plans will be maintained current and will:

- (A) Outline the system performance requirements, including those resulting from any expected expansions of Corps missions.
- (B) Describe the extent to which existing facilities fulfill performance requirements.
- (C) Describe alternative approaches which will upgrade the system to meet the requirements not fulfilled by existing facilities, or are more cost effective then the existing system.
- (D) Justify and recommend a system considering timeliness, reliability, economics and other factors deemed important.
- (E) Delineate system scope, implementation schedules, proposed annual capital expenditures by district, total costs, and sources of funding.
- (iii) Modified master plans should be submitted to DAEN-CWE-HW by 1 February, whenever revisions are required, to include equipment not previously approved or changes in scope or approach. Submittal by the February date will allow adequate time for OCE review and approval prior to annual budget submittals.
- (iv) Division commanders are delegated authority to approve detailed plans for subsystems and networks of approved master plans. Plans approved by the division commander should meet the following conditions:
- (A) The plan conforms to an approved master plan.
- (B) The equipment is capable of functioning independently.
- (C) An evaluation of alternatives has been completed considering reliability, cost and other important factors.
- (D) The plan is economically justified, except in special cases where legal requirements dictate performance standards which cannot be economically justified.
- (v) Copies of plans approved by the division commander shall be forwarded to appropriate elements in OCE in support of funding requests and to obtain approval of Automatic Data Processing Equipment (ADPE), when applicable.

(vi) Water control data systems may be funded from Plant Revolving Fund; O&M General; Flood Control, MR&T, and Construction, General. Funding for water control equipment that serves two or more projects will be from Plant Revolving Fund in accordance with ER 1125-2-301. District and division water control managers will coordinate plant revolving fund requests with their respective Plant Replacement and Improvement Program (PRIP) representatives following guidance provided in ER 1125-2-301. Budget funding requests under the proper appropriation title should be submitted only if the equipment is identified in an approved master plan.

(vii) Justification for the Automatic Data Processing Equipment (ADPE) aspects of water control data systems must conform to AR 18–1, Appendix I or J as required. The "Funding for ADPE" paragraph in Appendixes I and J must cite the source of funds and reference relevant information in the approved master plan and detailed plan.

(viii) Division water control managers will submit annual letter summaries of the status of their respective water control systems and five-year plan for improvements. These summaries will be submitted to DAEN-CWE by 1 June for coordination with DAEN-CWO, CWB and DSZ-A, prior to the annual budget request. Summaries should not be used to obtain approval of significant changes in master plans. Sources of funding for all items for each district and for the division should be delineated so that total system expenditures and funding requests are identified. Changes in the master plan submitted 1 February should be documented in this letter summary if the changes were approved.

(7) Summary of runoff potentials in current season (RCS DAEN-CWO-2). (i) The Chief of Engineers and staff require information to respond to inquiries from members of Congress and others regarding runoff potentials. Therefore, the division commander will submit a snowmelt runoff and flood potential letter report covering the snow accumulation and runoff period, beginning generally in February and continuing monthly, until the potential no longer exist. Dispatch of supplemental reports will be determined by the urgencies of situations as they occur. The reports will be forwarded as soon as hydrologic data are available, but not later than the 10th of the month. For further information on reporting refer to ER 500–1–1, 33 CFR part 203.

(ii) During major drought situations or low-flow conditions, narrative summaries of the situation should be furnished to alert the Chief of Engineers regarding the possibility of serious runoff deficiencies that are likely to call for actions associated with Corps of Engineers reservoirs.

(iii) The reports referred to in paragraphs (m)(7) (i) and (ii) of this section will include general summaries regarding the status of reservoir storage, existing and forecasted at the time of the reports.

- (8) Reports on project operations during flood emergencies. Information project regulations to be included in reports submitted to the Chief of Engineers during flood emergencies in accordance with ER 500-1-1 include rate of inflow and outflow in CFS, reservoir levels, predicted maximum level and anticipated date, and percent of flood control storage utilized to date. Maximum use should be made of computerized communication facilities in reporting project status to DAEN-CWO-E/CWE-HW in accordance with the requirements of ER 500-1-1, 33 CFR part 203.
- (9) Post-flood summaries of project regulation. Project regulation effects including evaluation of the stage reductions at key stations and estimates of damages prevented by projects will be included in the post flood reports required by ER 500-1-1, 33 CFR part 203.
- (n) Water Control Management Boards. (1) The Columbia River Treaty Permanent Engineering Board was formed in accordance with the Columbia River Treaty with Canada. This board, composed of U.S. and Canadian members, oversees the implementation of the Treaty as carried out by the U.S. and Canadian Entities.
- (2) The Mississippi River Water Control Management Board was established by ER 15-2-13. It consists of the Division Commanders from LMVD, MRD, NCD, ORD, and SWD with the Director of Civil Works serving as chairman. The purposes of the Board are:

(i) To provide oversight and guidance during the development of basin-wide management plans for Mississippi River Basin projects for which the US Army Corps of Engineers has operation/regulation responsibilities.

(ii) To serve as a forum for resolution of water control problems among US Army Corps of Engineers Divisions within the Mississippi River Basin when agreement is otherwise unobtainable.

(o) List of projects. Projects owned and operated by the Corps of Engineers subject to this regulation are listed with pertinent data in Appendix E. This list will be updated periodically to include Corps projects completed in the future. Federal legislation, Federal regulations and local agreements have given the Corps of Engineers wide responsibilities for operating projects which it does not own. Non-Corps projects subject to this regulation are included in Appendix A of ER 1110-2-241.

APPENDIX A TO §222.5—REFERENCES

- The Federal Power Act, Pub. L. 436-83, approved 10 June 1920, as amended (41 Stat. 1063; 16 U.S.C. 791(a))
- Section 3 of the Flood Control Act approved 22 June 1936, as amended (49 Stat. 1571; 33 U.S.C. 701(c))
- 3. Section 9(b) of Reclamation Project Act of 1939, approved 4 August 1939 (53 Stat. 1187; 43 U.S..C. 485)
- Section 7 of the Flood Control Act approved 22 December 1944 (58 Stat. 890; 33 U.S.C. 709)
- 5. Section 5 of Small Reclamation Projects Act of 6 August 1956, as amended (70 Stat. 1046; 43 U.S.C. 422(e))
- Section 9 of Pub. L. 436–83d Congress (68 Stat. 303)
- 7. The Fish and Wildlife Coordination Act of 1958, Pub. L. 85-624
- 8. The Federal Water Project Recreation Act Uniform Policies, Pub. L. 89-72
- 9. The National Environmental Policy Act of 1969, Pub. L. 91–190
- 10. The Clean Water Act of 1977, Pub. L. 95–
- 11. Executive Order 12088, Federal Compliance with Pollution Control Standards, 13 October 1978
- 33 CFR 208.10, Local flood protection works; maintenance and operation of structures and facilities (9 FR 9999; 9 FR 10203)
- 13. 33 CFR 208.11, Regulations for use of Storage Allocated for Flood Control or Navigation and/or Project Operation at Reservoirs

subject to Prescription of Rules and Regulations by the Secretary of the Army in the Interest of Flood Control and Navigation (43 FR 47184)

- 14. AR 18-1 15. ER 11-2-101 16. ER 15-2-13
- 17. ER 500-1-1, 33 CFR part 203
- 18. ER 1110-2-241, 33 CFR part 208
- 19. ER 1110-2-1400
- 20. ER 1110-2-1402
- 21. ER 1110-2-1941
- 22. ER 1125-2-301 23. ER 1130-2-303
- 24. ER 1130-2-334
- 25. ER 1130-2-415
- 26. ER 1130-2-417
- 27. ER 1130-2-419
- 28. EM 1110-2-3600
- APPENDIX B TO §222.5—SUMMARY OF CORPS OF ENGINEERS RESPONSIBIL-ITIES FOR PRESCRIBING REGULATIONS FOR Non-Corps RESERVOIR **PROJECTS**

Summary

1. (a) "Regulations for Use of Storage Allocated for Flood Control or Navigation and/or Project Operation at Reservoirs subject to Prescription of Rules and Regulations by the Secretary of the Army in the Interest of Flood Control and Navigation' (33 CFR 208.11) prescribe the responsibilities and general procedures for regulating reservoir projects capable of regulation for flood control or navigation and the use of storage allocated for such purposes and provided on the basis of flood control and navigation, except projects owned and operated by the Corps of Engineers; the International Boundary and Water Commission, United States and Mexico; and those under the jurisdiction of the International Joint Commission, United States and Canada, and the Columbia River Treaty.

(b) Pertinent information on projects for which regulations are prescribed under Section 7 of the 1944 Flood Control Act, (Pub. L. 78-58 Stat. 890 (33 U.S.C. 709)) the Federal Power Act (41 Stat. 1063 (16 U.S.C. 791(A))) and Section 9 of Pub. L. 436-83d Congress (68 Stat. 303) is published in the FEDERAL REG-ISTER in accordance with 33 CFR 208.11.

Publication in the FEDERAL REGISTER establishes the fact and the date of a project's regulation plan promulgation.

2. Section 7 of Act of Congress approved 22 December 1944 (58 Stat. 890; 33 U.S.C. 709), reads as follows:

'Hereafter, it shall be the duty of the Secretary of War to prescribe regulations for the use of storage allocated for flood control or navigation at all reservoirs constructed wholly or in part with Federal funds provided on the basis of such purposes, and the

operation of any such project shall be in accordance with such regulations: Provided, That this section shall not apply to the Tennessee Valley Authority, except that in case of danger from floods on the Lower Ohio and Mississippi Rivers the Tennessee Valley Authority is directed to regulate the release of water from the Tennessee River into the Ohio River in accordance with such instructions as may be issued by the War Depart-

- 3. Section 9(b) of the Reclamation Project Act of 1939, approved 4 August 1939 (53 Stat. 1189, 43 U.S.C. 485), provides that the Secretary of the Interior may allocate to flood control or navigation as part of the cost of new projects or supplemental works; and that in connection therewith he shall consult with the Chief of Engineers and may perform any necessary investigations under a cooperative agreement with the Secretary of the Army. These projects are subject to 33 CFR 208.11 regulations.
- 4. Several dams have been constructed by State agencies under provisions of legislative acts wherein the Secretary of the Army is directed to prescribe rules and regulations for project operation in the interest of flood control and navigation. These projects are subject to 33 CFR 208.11 regulations.
- 5. There are few dams constructed under Emergency Conservation work authority or similar programs, where the Corps of Engineers has performed major repairs or rehabilitation, that are operated and maintained by local agencies which are subject to 33 CFR 208.11 regulations.
- 6. The Federal Power Act, approved 10 June 1920, as amended (41 Stat. 1063, 16 U.S.C. 791 (A)), established the Federal Power Commission, now Federal Energy Regulatory Commission (FERC), with authority to issue licenses for constructing, operating, and maintaining dams or other project works for the development of navigation, for utilization of water power and for other beneficial public uses in any streams over which Congress has jurisdiction. The Chief of Engineers is called upon for advice and assistance as needed in formulating reservoir regulation requirements somewhat as follows:
- a. In response to requests from the FERC, opinions and technical appraisals are furnished by the Corps of Engineers for consideration prior to issuance of licenses by the FERC. Such assistance may be limited to general presentations, or may include relatively detailed proposals for water control plans, depending upon the nature and scope of projects under consideration. The information furnished is subject to such consideration and use as the Chairman, FERC, deems appropriate. This may result in inclusion of simple provisions in licenses without elaboration, or relatively detailed requirements for reservoir regulation schedules and plans.

- b. Some special acts of Congress provide for construction of dams and reservoirs by non-Federal agencies or private firms under licenses issued by the FERC, subject to stipulation that the operation and maintenance of the dams shall be subject to reasonable rules and regulations of the Secretary of the Army in the interest of flood control and navigation. Ordinarily no Federal funds are involved, thus Section 7 of the 1944 Flood Control Act does not apply. However, if issuance of regulations by the Secretary of the Army is required by the authority under which flood control or navigation provisions are included as functions of the specific project or otherwise specified in the FERC license, regulation plans will be prescribed in accordance with 33 CFR 208.11 regulations.
- 7. Projects constructed by the Corps of Engineers for local flood protection purposes are subject to conditions of local cooperation as provided in Section 3 of the Flood Control Act approved 22 June 1936, as amended. One of those conditions is that a responsible local agency will maintain and operate all works after completion in accordance with regulations prescribed by the Secretary of the Army. Most such projects consist mainly of levees and flood walls with appurtenant drainage structures. Regulations for operation and maintenance of these projects has been prescribed by the Secretary of the Army in 33 CFR 208.10. When a reservoir is included in such a project, it may be appropriate to apply 33 CFR 208.10 in establishing regulations for operation, without requiring their publication in the FEDERAL REGISTER. For example, if the reservoir controls a small drainage area, has an uncontrolled flood control outlet with automatic operation or contains less than 12,500 acre-feet of flood control or navigation storage, 33 CFR 208.10 may be suitable. However, 33 CFR 208.11 regulations normally would be applicable in prescribing flood control regulations for the individual reservoir, if the project has a gated flood control outlet by which the local agency can regulate floods.
- 8. Regulation plans for projects owned by the Corps of Engineers are not prescribed in accordance with 33 CFR 208.11. However, regulation plans for projects constructed by the Corps of Engineers and turned over to other agencies or local interests for operation may be prescribed in accordance with 33 CFR 208.11.
- 9. The Small Reclamation Projects Act of 6 August 1956 provides that the Secretary of the Interior may make loans or grants to local agencies for the construction of reclamation projects. Section 5 of the Act provides in part that the contract covering any such grant shall set forth that operation be in accordance with regulations prescribed by the head of the Federal department or agency primarily concerned. Normally, 33 CFR 208.11 is not applicable to these projects.

- APPENDIX C TO §222.5—PROCEDURES FOR DEVELOPING AND PROCESSING REGU-LATIONS FOR NON-CORPS PROJECTS IN CONFORMANCE WITH 33 CFR 208.11
- 1. Sequence of actions. a. Discussions leading to a clarification of conditions governing allocations of storage capacity to flood control or navigation purposes and project regulation are initiated by District/Division Engineers through contacts with owners and/or operating agencies concerned at regional level.
- b. Background information on the project and conditions requiring flood control or navigation services, and other relevant factors, are assembled by the District Engineer and incorporated in a "Preliminary Information Report". The Preliminary Information Report will be submitted to the Division Engineer for review and approval. Normally, the agency having jurisdiction over the particular project is expected to furnish information on project features, the basis for storage allocations and any other available data pertinent to the studies. The Corps of Engineers supplements this information as required.
- c. Studies required to develop reservoir regulation schedules and plans usually will be conducted by Corps of Engineers personnel at District level, except where the project regulation affects flows in more than one district, in which case the studies will be conducted by or under supervision of Division personnel. Assistance as may be available from the project operating agency or others concerned will be solicited.
- d. When necessary agreements are reached at district level, and regulations developed in accordance with 33 CFR 208.11 and EM 1110-2-3600, they will be submitted to the Division Commander for review and approval, with information copies for DAEN-CWE-HW. Usually the regulations include diagrams of operating parameters.
- e. For projects owned by the Bureau of Reclamation, the respective Regional Directors are designated as duly authorized representatives of the Commissioner of Reclamation. By letter of 20 October 1976, the Commissioner delegated responsibilities to the Regional Directors as follows: "Regarding the designated authorization of representatives of the Commissioner of Reclamation in matters relating to the development and processing of Section 7 flood control regulations, we are designating each Regional Director as our duly authorized representative to sign all letters of understanding, water control agreements, water control diagrams, water control release schedules and other documents which may become part of the prescribed regulations.

The Regional Director also will be responsible for obtaining the signature of the designated operating agency on these documents where such is required. Regarding internal coordination within the Bureau of Reclamation, the Regional Directors will obtain the review and approval of this office and at appropriate offices with our Engineering and Research Center, Denver, Colorado, prior to signing water control documents."

- f. In accordance with the delegation cited in paragraph e, 33 CFR 208.11 regulations pertaining to Bureau of Reclamation projects will be processed as follows:
- (1) After regulation documents submitted by District Commanders are reviewed and approved by the Division Commander they are transmitted to the respective Regional Director of the Bureau of Reclamation for concurrence of comment, with a request that tracings of regulation diagrams be signed and returned to the Division Commander.
- (2) If any questions arise at this stage appropriate actions are taken to resolve differences. Otherwise, the duplicate tracings of the regulation diagram are signed by the Division Commander and transmitted to the office of the project owner for filing.
- (3) After full agreement has been reached in steps (1) and (2), the text of proposed regulations is prepared in final form. Copies of any diagrams involved are included for information only.
- (4) A letter announcing completion of action on processing the regulations, with pertinent project data as specified in paragraph 208.11(d)(11) of 33 CFR 208.11, and one copy of the signed tracings of diagrams are forwarded to HQDA (DAEN-CWE-HW) WASH DC 20314 for promulgation and filing. The of-

- fice of the Chief of Engineers will forward the pertinent project data to the Liaison Officer with the Federal Register, requesting publication in the FEDERAL REGISTER.
- g. Regulations developed in accordance with 33 CFR 208.11 and applicable to projects that are not under supervision of the Bureau of Reclamation are processed in substantially the manner described above. All coordination required between the Corps of Engineers and the operating agency will be accomplished at field level.
- h. Upon completion of actions listed above, Division Commanders are responsible for informing the operating agencies at field level that regulations have been promulgated.
- 2. Signature blocks: Some 33 CFR 208.11 regulations contain diagrams of parameter curves that cannot be published in the FEDERAL REGISTER, but are made a part thereof by appropriate reference. Each diagram bears a title block with spaces for the signature of authenticating officials of the Corps of Engineers and the owner/operating agency of the project involved.
- 3. Designation of Corps of Engineers Representatives. Division Commanders are designated representatives of the Chief of Engineers in matters relating to development and processing of 33 CFR 208.11 regulations for eventual promulgation through publication of selected data specified in paragraph (d)(11) §208.11. Division Commanders are designated as the Corps of Engineers signee on all letters of understanding, water control agreements and other documents which may become part of prescribed regulations for projects located in their respective geographic areas, and which are subject to the provisions of 33 CFR 208.11.

APPENDIX D TO §222.5—SAMPLE TABULATION

BARDWELL LAKE, MONTHLY LAKE REPORT, MAY 1975

Day	Elevation 2,400 fe		Storage 2400 A-F	Evap DSF	Pump DSF	Release DSF	Inflow adj. DSF	Rain, inch
1	421.30	421.31	55979	28	2.0	0	84	0.00
2	421.32	421.37	56196	5	2.0	0	117	.00
3	421.43	421.44	56449	23	1.9	0	152	.14
4	421.45	421.47	56558	1	1.8	0	58	.00
5	421.49	421.34	56088	1	2.0	324	50	.00
6	421.20	421.01	54902	14	1.9	632	50	.00
7	420.88	420.89	54473	4	2.0	269	59	.09
8	420.89	420.91	54544	5	2.3	0	44	.00
9	420.90	420.89	54473	11	1.5	0	38	.00
10	420.90	420.90	54509	28	3.0	0	27	.00
11	420.91	421.35	56124	26	1.8	0	824	.00
12	421.54	421.65	57213	31	2.1	0	582	1.61
13	421.70	421.75	57578	29	2.2	0	216	.00
14	421.78	421.76	57614	34	1.9	249	303	.03
15	421.69	421.52	56739	22	1.9	643	225	.57
16	421.39	421.28	55871	39	2.1	535	138	.00
17	421.19	421.09	55188	10	2.2	393	119	.00
18	421.03	421.05	55045	46	2.0	143	60	.00
19	421.04	421.07	55116	17	2.3	0	55	.00

Corps of Engineers, Dept. of the Army, DoD

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BARDWELL LAKE, MONTHLY LAKE REPORT, MAY 1975—Continued

Day	Elevation 2,400 fe		Storage 2400 A-F	Evap DSF	Pump DSF	Release DSF	Inflow adj. DSF	Rain, inch
2021	421.06 421.39	421.30 421.47	55943 56558	21 20	2.1 2.1	0	440 332	.21
22	421.50	421.39	56268	42	2.1	247	145	.00
23	421.37 425.61	424.91 426.15	69726 74825	31 22	2.0 2.0	328	7146 2595	.22 2.38
25	426.15	426.55	76523	18	2.3	0	876	.11
26	426.72	426.80	77598	42	2.1	0	586	.00
27 28	426.95 427.14	427.00 427.15	78465 79116	23 31	2.0 2.1	0	462 361	.00
29	427.31	427.70	81528	61	1.9	0	1279	.20
30	427.94 428.20	428.05 428.22	83082 83837	11	2.0 2.1	0	796 389	1.02
Monthly total:	420.20	420.22	03037	'	2.1		309	.00
(DSF)				700	64	3763	18626	7.74
(A–F)			27966	1389	126	7464	36945	

PROJECT
P
LIST
222.5-
8
2
APPENDIX E

		APPENDIX E TO § 222.5—LIST OF PROJECTS	5—LIST OF P	ROJECTS					
Project name 1	State/county	Stream 1	Project pur-	Storage 1.000	Elev limits feet M.S.L.	its feet .L.	Area in acres	acres	Auth legis ³
			pose∠	AF	Upper	Lower	Upper	Lower	
		Lower Mississippi Valley Division	oi Valley Divisio	u					
Alligator—Catfish FG	MS Issaquena	Little Sunflower	ш	0.0	0.0	0.0	0	0	FCA Jun 36.
Arkabutla Lk	MS Desoto	Coldwater	L	525.0	238.3	209.3	33,400	5,100	FCA Jun 36.
Ascalmore—Tippo FG & CS	MS Tallahatchie	Ascalmore	ш	0.0	136.0	118.0	0	0	FCA Jun 36.
Bienvenue FG	LA St Bernard	Bayou Bienvenue	L (0.0	2.0	2.0	0	0	PL 298–89
Big Lk Ditch #81 CS	AR Mississippi	Ditch 81 Extension	ပ	0.0	0.0	230.0	0 0	0 0	FCA Oct 65.
Big LK DIV CS	AK Mississippi	Title K	<u>ن</u> د	0.0	0.0	230.0	> 0	0 0	FCA Oct 65.
Big Lk South and CS	AR Mississippi	Ditch 28	ט כ	0.0	0.0	230.0	0 0	00	FCA Oct 63.
Birds Point—New Madrid Div	MO New Madrid	Mississippi) LL	0.0	330.5	328.5	131,000	71,000	FCA May 28.
Floodway.									
Bodcau Lk	LA Bossier	Bayou Bodcau	ш	35.3	199.5	157.0	21,000	110	PL 74-839.
Bonnet Carre Div Spillway	LA St Charles	Mississippi R	ш.	0.0	24.0	20.0	0	0	FCA May 28.
Bowman Lock	LA Vermilion	OIWW	_	0.0	1.2	1.2	0	0	PL 79-14.
Caddo Lk	LA Caddo	Cypress Bayou	Zı	128.6	182.7	168.5	29,000	26,800	FCA Oct 65.
Cairo 10th & 20th St PS	IL Pulaski	Ohio	_	0.0	310.5	299.0	0	0	PL 90-483.
Calcasieu SW Barrier & Lock	LA Calcasieu	Calcasieu R	_	0.0	1.2	1.2	0	0	RHA Oct 62.
			-	Ċ	1	1	000	000	PL /9-525.
Callon L&D	AK Union	Ouachita	zi	0.0	0.5	0.5	002,21	12,200	KHA 1950.
Caldillellt FG East & West	LA St Maly	wax Lake Oullet bayou	Z	2	0.0	0.0	>	>	10A 30II 30.
Cannon Re-red	MO Rails	Salt R	PCA	5.8	528.0	521.0	1,020	460	HD 507.
Carlyle Lk	IL Clinton	Kaskaskia R	ш	0.669	462.5	445.0	50,440	24,580	SD 44.
•			NMCAR	233.0	445.0	429.5	0	7,100	
Catahoula Lk CS	LA LaSalle	Catahoula Div	CR	118.0	34.0	27.0	25,000	94	RHA 1960.
Catfish Point CS	LA Cameron	Mermentau R	Z.	0.0	1.2	1.2	0	0	FCA Aug 41, RHA Jul 64.
Charenton FG	LA St Mary	Grand Lk	N.	0.0	0.0	0.0	0	0	RHA Jul 46, FCA May 28.
Cocodrie FG FG	LA Concorida	Bayou Cocodrie	ш	0.0	46.0	13.0	0	0	FCA Aug 41.
Collins Cr	MS Warren	Collins Cr	ш	0.0	84.0	0.79	0	0	FCA 1941.
Columbia L&D	LA Caldwell	Ouachita	z	0.0	25.0	25.0	7,070	2,070	RHA 1950.
Connerly CS	AR Chicot	Connerly Bayou	FCR	0.0	116.0	106.0	0	0	FCA Aug 68.
Courtableau Drainage CS	LA St Landry	Bayou Courtableau	ш	0.0	18.0	16.0	0	0	FCA May 28, PL 391-70.
Darbonne CS	LA St. Landry	Bayou Darbonne	Œ	0.0	18.0	16.0	0	0	
DeGray LK	AR Desoto	Caddo	FNPMRA	881.9	423.0	345.0	23,800	6,400	
DeGray Rereg. St	AR Clark	Caddo	NMRA	3.6	221.0	209.0	430	06	RHA 1950. WSA 1958.
Ditch Bayou Dam	AR Chicot	Ditch Bayou	FCR	0.0	106.0	93.0	0	0	FCA Aug 68.
Drainage Dist #17 PS	AR Mississippi	Ditch 71	ш	3.0	236.0	228.0	4,100	0	FCA Aug 68, PL 90-483.
Drinkwater PS	MO Mississippi	Drinkwater Sewer	ш	20.6	315.0	307.0	4,000	200	FCA May 50, PL 516.
Dupre FG	LA St Bernard	Bayou Dupre	ш	0.0	2.0	2.0	0	0	PL 298–89.
East St Louis PS	IL St. Clair	IDD	ш	0.0	0.0	0.0	0	0	FC Act 36.
Empire FG Hurr Prot & Lock	LA Plaque mines	Mississippi R	ш	0.0	2.0	2.0	0	0	PL 874–87.
Enid L	MS Yalobusha	Yacona	ш	0.099	268.0	230.0	28,000	6,100	FCA Jun 36.

17,500 RHA 1950. 22 FCA 1948, PL 85–500. 0 PL 86–645.	2,500 FCA May 28, PL 85–500. 9,800 FCA Jun 36. 1,400 FCA May 50. 7,120 RHA 1950. 1,200 SD 44. 0 PL 90–483. 0 PL 90–483. 0 PL 90–483. 0 PL 90–483. 0 PL 90–483. 0 PL 90–483.	16,600	0 FCA Oct 65, PL 89–298. 0 FCA 1941. 0 FCA Aug 68.		5,900 PCA Jun 30. 0 FCA May 28. 2,860 FCA Oct 65. 0 PL 83–780.		5,400 HD 541. 5,400 FCA Jun 36. 0 FCA Aug 41. 11,100 HD 232. 3,000 O FCA May 28. 2,240 FCA Oct 65. 0 FCA 1941.
46,500 94 0	149,000 64,600 18,500 7,120 1,300 0 0 0	30,000	0 000	9,800 0 0 0 38,400	18,600 0 0 4,350 0	0000	24,800 18,900 58,500 0 25,300 11,100 0
65.0 257.0 0.0	140.0 165.0 165.0 363.0 40.0 64.0 91.5 119.6	429.7	3.0 60.0 282.0 90.0	436.9 504.0 480.0 32.5 606.0	567.2 198.3 49.0 70.0 5.0	10.0 2.6 0.0 62.2	236.0 236.0 236.0 17.2 599.7 573.0 573.0 210.0 60.0 84.0
70.0 269.0 0.0	231.0 207.2 207.2 34.0 368.0 40.0 71.2 95.0 120.0	434.0	3.0 85.0 286.0 118.2	563.0 563.0 592.0 32.5 638.0	59.5 59.5 76.9 70.0	65.4 46.1 0.0 66.0	405.0 405.0 281.4 1.2 626.5 599.7 29.7 0.0 68.5
32.5 0.5 0.0	2,805.0 1,357.4 2,863.0 1.1 1.1 0.0 0.0 0.0 0.0 0.0	49.7	0.0	0.0 407.9 0.0 894.0	30.0 30.0 0.0 0.0	0.0.0.0	109.0 1,569.9 0.0 474.0 180.0 0.0 0.0 0.0
Z u _ 2	<u>.</u> Zuuuzzzzzzzz	2 Z Z	т тт т С К		Т Т Т Т Т О С А Х	ZZLLl	T T MA N M CAR T T C C N
Ouachita	White Yalobusha Skura Sk Francis St Francis	Mississippi R	Bayou LaFourche Lit. Sunflower Mississippi Macon Lk	Little Missouri	St. Francis	GIWW IDD Bayou Rapides	Big Muddy K
AR UnionTN Dyer	AR Philips MS Grenada AR Lee AR Catahoula IL Randoph LA Rapides LA Rapides LA Rapides LA Rapides LA Rapides LA Rapides AR	MO Lincoln	LA LaFourche	AR Pike	AR Poinsett	LA W Feliciana	IL Franklin MS Panola LA Vermilion IL Shelby AR Poinsett MS Issaquena MS Humphreys
Felsenthal L&D Finley Street PS Finley Street PS Freshwater Lock	Graham Burke PS Grenada Lk Huxtable PS Huxtable PS Jonesville L&D L&D 1 L&D 2 L&D 3 L&D 5	L&D 26	ow Hurr Prot	Lk Greeson Lk Ouachita Long Branch DS Mark Twain Lk	Marked Tree Siphon Morganza Div CS Muddy Bayou CS Old River Div CS Low Sill Overbank &	Old River Lock Port Allen Lock Prairie Dupont East & West PS	Sardis Lk Sardis Lk Sardis Lk Schooner Bayou CS & Lock Shebyville Lk Sorrell Lock St Francis Lk CS Steele Bayou CS Tchula Lk Lower FG

APPENDIX E TO § 222.5—LIST OF PROJECTS—Continued

	Aum legis 3	FCA Jun 36. PL 89–789, FCA May 28. FCA Oct 65. FCA Jul 46. HD 159. FCA Jun 36. FCA Jun 36. FCA Act 38. FCA Jun 36.										3	, PL /8-334.			
	Aur			PL 90-483.		SD 247-78. PL 90-483.	PL 85–500.	PL 87–874.	PL 85–500.	HD 396-84. PL 78-534.	PL 80–858. PL 81–516.	HD 669–80. PL 77–228.	PL 87–874.	SD 122-87. PL 77-228.		HD 396–84. PL 77–228. HD 655–76.
acres	Lower	2, 300 2, 300 5, 200 0		109	000'09	57,000	315	1,732	1,780	00	1,412	12 852	2,006	98 0	230	30
Area in acres	Upper	7,800 9,300 23,200 0	-	718	61,000	982	660	5,131	3,640	1,780	4,742	1,412	12,891	198	920	230 214 44
its feet	Lower	92.0 16.0 23.0 235.0 142.0 354.7 88.5 296.0 0.0		5,558.0	1,422.0	1,420.0	1,307.4	2,754.8	1,284.0	1,250.0 2,540.0	3,526.0 5,432.0	5,385.0	875.5	3,585.0	1,232.9	1,197.0 3,875.0 3,868.0
Elev limits feet M.S.L.	Upper	108.0 18.0 37.0 252.0 158.0 394.7 111.6 302.0 0.0	-	5,635.5	1,423.0	1,422.0	1,322.5	2,777.0	1,311.0	1,284.0 2,593.0	3,545.0 5,500.0	5,432.0	903.4	3,651.4	3,585.0	1,232.9 3,936.0 3,875.0
Storage	AF (0.0 23.4 96.1 613.2 0.0 0.0		28.8	61.0	117.0	7.2	72.7	71.6	26.0	0.1	80.0	267.8	6.7	0.9 8.0	2.6
Project pur-	pose 2	ı. ∑ ւււււււ	Missouri River Division	F F		FNPIMCAR) (i	Σ ΙΤ <u>Γ</u>	Y D E L L L	FCR	ш ш	ğ r (ا د لد ا	T T T	Ϋ́L	F F F R
Č	otream	Atchula Lk Atchalalaya R Bayou Corcodrie Little R Cypress Bayou St Francis R Wasp Lk-Bear Cr Mississippi IDD Yazoo	Missouri Ri	Bear Cr	Missouri R	Little Blue R	Olive Br. Salt Creek	No Fk Grand River	Oak Creek trib. Salt Creek.	Bull Hook Cr Scott Cou-	Deadman's Gulch	Cherry Cr	Wakarusa R	Cold Brook	Holmes Cr Trib to Salt	Cottonwood Springs Cr
č	State/county	MS Humphreys LA St Mary LA Cocordia MO Dunklin LA Caddo MO Wayne MS Humphreys KY Futton IL Madison MS Yazzoo		CO Jefferson	SD Lyman Buffalo Hughes.	MO Jackson	NE Lancaster	ND Bowman	NE Lancaster	MT Hill	SD Pennington	CO Araphahoe	KS Douglas	SD Fall River	NE Lancaster	SD Fall River Cottonwood Springs Cr
	Project name	Tchula Lk Upper FG Teche-Vermilion PS & CS Tensas-Cocodie PS Treasure Island PS Wallace Lk Wappapello Lk Wasp Lk West Hickman PS Wood R PS Yazoo City PS		Bear Creek Dam & Res	Big Bend Dam & Lk Sharpe	Blue Springs Dam & Lk	Blue Stem Lake & Dam 4	Bowman-Haley Dam & Res	Branched Oak Lk & Dam 18	Bull Hook Dam	Cedar Canyon Dam	Cherry Cr Dam & Res	Clinton Dam & Lk	Cold Brook Dam & Res	Conestoga Lake & Dam 12	Cottonwood Springs Dam & Res

Fort Peck Dam & Res	MT Valley, Mc Cone	Missouri R	ш	977.0	2,250.0	2,246.0	249,000	240,000	240,000 PL 73–409.
			FNPIMCAR	13,649.0	2,246.0	2,160.0	240,000	92,000	PL 75–529, HD 238–73. PI 78–534, SD 247–78.
Fort Randall Dam, Lk Francis Case	SD Gregory Charles	Missouri R	L	985.0	1,375.0	1,365.0	102,000	95,000	PL 78–534.
			FNPIMCAR	3,021.0	1,365.0	1,320.0	95,000	41,000	SD 247-78.
Garrison Dam, Lk Sakakawea	ND Mercer McLean	Missouri K	FNPIMCAR	1,494.0	1,854.0	1,850.0	382,000	365,000	PL 78-534. SD 247-78
Gavins Point Dam, Lewis & Clark Lk	SD Yankton	Missouri R		610	1 210 0	1 208 0	32,000	_	PI 78–534
	NE Knox	5	FNPIMCAR	95.0	1,208.0	1,204.5	29,000		SD 247-78.
Glenn Cunningham Lk, Dam 11	NE Douglas	Little Papillion Cr	ш	14.0	1,142.0	1,121.0	922	392	PL 90-483.
(:	FRCA	3.9	1,121.0	1,085.0	392	0	HD 349-90.
Harlan County LK	NE Harlan	Kepublican K	_ i	498.0	1,973.5	1,946.0	23,064	13,249	PL //-228.
Harry S Truman Dam & Res	MO Benton	Osage R	<u>.</u> u	342.6	739.6	706.0	13,249	55.600	HD 892-76, PL-78-534. PL 83-780.
		b	FPCR	1,203.4	706.0	635.0	55,600	0	HD 549-81, PL 87-874. HD 578-87
Hillsdale Lk	KS Miami	Big Bull Cr	L	83.6	931.0	917.0	7,410	4,580	PL 83-780.
		1	FNMCAR	76.3	917.0	852.4	4,580		HD 642-81.
Holmes Park Lk & Dam 17	NE Lancaster	Antelope Cr Trib to Salt Cr.	ш	2.7	1,266.0	1,242.4	410	100	PL 85–500.
			FCR	0.8	1,242.4	1,218.0	100	က	HD 396-84.
Kanopolis Lk	KS Ellsworth	Smoky Hill R	шi	370.0	1,508.0	1,463.0	13,999	3,560	PL 75–761.
				25.8	1,463.0	1,425.0	3,560	0	PL 78-534, HD 842-76.
Kelly Road Dam	CO Araphoe	Westerly Cr	ш. І	0.3	5,362.0	5,342.0	38	0 0	PL 80–858, PL 84–99.
Long Branch LK	MC Kandolph	Little East FK Chariton K	7 J	30.4	801.0	751.1	3,670	2,429	PL 89-298.
7 weix200	MO Jackson	G GIR	<u> </u>	0, 4, C	0.187	010	1 060	020	FID 230-69.
			FCAR	22.1	891.0	810.0	930	0	HD 169–90.
Melvern Lk	KS Osage	Marais des Cygnes R	ш	208.4	1,057.0	1,036.0	13,948	6,928	PL 83-780.
			FNMCAR	154.4	1,036.0	0.096	6,928	0	PL 75-761, HD 549-81.
Milford Lk	KS Geary	Republican R	Ш.	756.7	1,176.2	1,144.4	27,255	17,270	PL 83-780.
	:		FCA	388.8	1,144.4	1,080.0	15,709		HD 642–81, PL 75–761.
Oahe Dam & LK	SD 8 Counties	Missouri K	FNIDIMCAR	1,097.0	1,620.0	1,617.0	373,000	359,000	PL /8-534. SD 247-78
Olive Cr Lk & Dam 2	NE Lancaster	Olive Br of Salt Cr		4.0	1,350.0	1,335.0	355		HD 396-84.
			FCR	1.5	1,335.0	1,314.0	174		PL 85-500.
Papio Dam Site #18 & Lk	NE Douglas	Boxelder Cr Papio Cr	ш	7.1	1,128.2	1,110.0	262	255	PL 90-483.
	(!		FCAR	3.4	1,110.0	1,060.5	255		HD 349–90.
Papio Dam Site #20 & LK	NE Sarpy	I rib South Branch Papio	7 L	6.1	1,113.1	1,096.0	493	246	PL 90-483.
0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- LI	20 4100 40 a C C C C C C C C C C C C C C C C C C	۲ ۲		1,096.0	1,069.0	7 4 4 7 0		ND 349-90.
Pawnee LK & Dam 14	NE Lancaster	No. Middle Or of Salt Or	и В	0.12	1,203.5	1,244.3	1,470	1,28	PL 85-500. HD 396-84
Perry I k	KS lefferson	Delaware R	ź L	521.9	920.6	891.5	25 342	12 202	PI 83-780
			Z	243.2	891.5	825.0	122	_	HD 642–81.
Pipestem Dam & Res	ND Stutsman	Pipestem Cr	L	137.0	1,496.3	1,442.4	4,754		PL 89–298.
:	:		FRC	9.6	1,442.4	1,415.0	882	62	HD 266-89.
Pomme De Terre Lk	MO Polk	Pomme De Terre R	- L	407.2	874.0	839.0	15,980	7,890	PL 75-761.
Pomona Lk	KS Osage	110 Mile Cr		176.8	1,003.0	974.0	8,520	400	nu 349–81, PL 63–760. PL 83–780.

APPENDIX E TO §222.5—LIST OF PROJECTS—Continued

	Aum legis 5	HD 549–81. PL 83–780.	HD 561–81. PL 89–298.	HD 262–89. PL 81–516, HD 669–80.	PL 85-500.	PL 90–483.	HD 349-90. PL 83-780.	HD 549-89.	PL 75–761. HD 842–76	PL 85–500.	HD 396-84.	PL 85–500. HD 396–84	PL 90-483.	HD 349-90.		SD 191-78, SD 247-78.	FL 83-300. HD 396-84.		PL 74–738.	FCA Sep 54.	PL 74–738.	PL 87–874.	PL 87–874.	PL 87–874.		PL 87–874.	PI 85_500	FCA Sep 54.	210 PL 74–738.	FCA Sept 54.
acres	Lower	11,013	7,192	00	196		24.777		14,875	255	-	303				0 0			124		0		947	952			323		210	1,730
Area in acres	Upper	4,000	9,995	7,192	490	302	38.288	24,777	54,179	505	255	303	493	246	19,980	9,040	208		489	1,430	192	87	1,411	1.184	952	2,159	2.060	3,020	1,100	3,450
ts feet	Lower	912.0	844.0	799.0	1,271.1	1,104.0	1,060.0	760.0	1,075.0	1,341.0	1,306.0	1,287.8	1,096.0	1,069.0	1,516.0	1,440.0	1,244.9		1,255.0	840.0	1,218.0	1,108.0	628.0	1,466.0	1,255.0	290.0	1 045 0	1,162.0	1,150.0	630.0
Elev limits feet M.S.L.	Upper	974.0	904.0	864.2	1,285.0	1,121.0	1,104.0	867.0	1,136.0	1,355.0	1,341.0	1,302.0	1,113.1	1,096.0	1,554.0	1,516.0	1,244.9		1,300.0	937.0	1,304.0	1,150.0	651.0	1.500.0	1,466.0	307.0	11170	1,228.0	1,203.0	657.0
Storage	AF.	70.6	205.4 101.8	144.6	4.7	3.7	779.6	887.1	1,937.4	5.3	2.8	0.8	6.1	2.7	530.7	247.8	2.0		14.6	73.4	8.0	1.7	27.0	36.2	92.0	27.1	80.0	114.7	30.2	70.2
Project pur-	pose ²	FNMAR	∑ Z L L	FMCAR F	F) (L L L	T T	FARPN	щZ	L	CFR	н н С	<u>.</u>	FCAR	(L	, Y	FCR	North Atlantic Division	ь	L	ш	ш	T U	Ž L	FMA	L Í	Σ L L	. LL	ш	ш
č	otleam	Chariton R	Little Platte R	Spring Gulch	Hickman Br of Salt Cr	Trib Big Papillion Cr	Sac R)	Big Blue R	Middle Cr Salt Cr		Hickman Br of Salt Cr	Trib South Branch Papio		Saline R	20 400 40 10 10 10 10 10 10 10 10 10 10 10 10 10	Cardwell bi ol salt of	North Atlan	Canacadea Cr	Kettle Cr	Canisteo R	Aylesworth Cr	Pohopoco Cr	North Branch Potomac R		Tulpehocken CR	S allowance R	West Branch Susque-	hanna R. Ouleout Cr	Bald Eagle Cr
Č	State/county	IA Appanoose	MO Clay	CO Douglas	NE Lancaster	NE Douglas	MO Cedar)	KS Riley	NE Seward		NE Lancaster	NE Sarpy		KS Russell	100000	NE Lancastel		NY Steuben	PA Clinton	NY Steuben	PA Lackawanna	PA Carbon, Monroe	MD Garret		PA Lebanon Berks	PA Tions	PA Clearfield	NY Delaware	PA Centre
	Project name	Rathbun Lk	Smithville Lk	Spring Gulch Imbankment	Stagecoach Lk & Dam 9	Standing Bear Lk & Dam 16	Stockton Lk	i	Tuttle Creek Lk	Twin Lakes & Dam 13		Wagon Train Lk & Dam 8	Wehrspann Lk & Dam 20		Wilson Lk	N			Almond Lake	Alvin R. Bush Dam	Arkport Dam	Aylesworth Cr Lk	Beltzville Dam & Lk	Bloominaton Lk		Blue Marsh Dam & Lk	N empseage	Curwensville Lk	East Sidney Lk	Foster Joseph Sayers Dam
												2	30																	

1,830 RD PL 79–526. 2,530 1,780 RD PL 80–858. 659 290 PL 80–858. 10,800 R,300 PL 87–874. 8,300 RD R7–228. 1,530 RD R8–500. 1,770 R80 PL 85–500. 1,530 RD R8–500. 1,430 RD R8–500. 1,430 RD R4–738.	-	5,430 4,430	300	24,800 3,580 PL 75–761.	3,580	1,690 1,550	1,500	97	13,100 12,700		0 190 176 FCA of 22 Dec 44.	5,800 5,500	0 17,950 17,650 RHA 1930.	38,820 36,600	12,680 12,000	7,500 7,000	13,440	0 20.800 20.000 RHA 1930.	20 426	29,123	0 17,070 16,500 RHA 1930.	21,100 20,000	0 13,000 12,400 PL 71–520.	30,000 28,500	3,725
1,300.0 1,582.0 1,554.0 1,125.0 1,125.0 1,125.0 1,572.0 1,572.0 1,086.		_				.0 586.7			_	.3 947.3			0 674.0				0.44.3	0.089.0			.0 610.0		.1 591.0		
1,450.0 1,610.0 1,582.0 1,053.0 1,053.0 1,621.0 1,131.0 1,131.0 1,010.0 435.0		1,266.0			680.0			579.0	_	952.3			675.0				639.0	631.0			611.0				561.1
79.9 60.7 24.5 24.5 24.0 514.0 51.6 52.5 66.5		68.6	0.6	439.0	40.3	9. t	1.6	2.3	70.4	1.	3.7	13.0	17.8	18.0	6.2	7.2	2.6	20.4	7 00	7.07	16.8	19.1	12.2	24.2	5.5
Lehigh R	North Central Division		Figure R			Fox K				Minnesota R FC		_	Mississippi R				Mississippi R N	Mississippi R			Mississippi R	Mississippi R	Mississippi R	Mississippi R	_
	1	She	_	_			<u>й</u> й	Ľ Ľ	_	Σ	<u>د</u> ک		=	=	_				2	<u></u>	ž.	ž			
PA Carbon, Luzerne, Lehig Monroe. Jacks VA Alleghany, Bath Jacks PA Wayne W Br PA Wayne W Br PA Huntingdon Raysis PA Susquehanna Lacks PA Troga Croof NY Broome Togal NY Broome Ofself NY Broome Ofself NY Broome Ofself A York Codo			W Outagamie Fo	_		: :	WI Pierce Es		_	MN Bigstone, Lacqui, M	-		MN Goodhue, Pierce M	=	-	MN Winona, Buffalo Mis		WI LaCrosse Mis	-					IL Whiteside	_

APPENDIX E TO §222.5—LIST OF PROJECTS—Continued

4+10	260	PL 71–520.	PL 71-520.	PL 71–520.	PL 71-520.	PL 71-520.	PL 71-520.	PI 71–520.	FCA of 22 .lin 36	PI 73-184	RHA of 1882 1895	RHA of 1882 1885	RHA of 1882 1885	RHA 1930	RHA of 1882 1895.	PL 71-126.	FCA Jun 36.		PL 74–738.	RHA of 1946.	PL 73–184.	RHA of 1899.	RHA of 1899.	RHA 1885.	FCA Dec 44	PI 75-761	PI 75–761	FCA 1936.		RHA of 1899.	FCA 1936.	FCA.	RHA of 1937 1945.	RHA of 1937 1945.	PL 69-100.	RHA of 1882 1885.	RHA of 1882 1885.	FCA 1936.		RHA of 1899.		20 PL 78–534, 83–780.	
acres	Lower	12.400	_		31,800			8,230	6 400	10,500	107 200	42.0	67	1 800	40	1.320	5,150	168,500		20	27.800		12,000	0	287.300	000, 80	,	10.950		8,200			20	8,600	1,020	1,040	115	4.000		62,000		20	
Area in acres	Upper	13.000	7,580	13.300	33,500	7,960	9.390	8,660	13,500	10,500	139,000	447	74	1 850	43	1.400	8,650	181,120	3,300	20	27.800	13,900	13,700	568	288 800	65,000	8,000	12,400	Î	10,600	16,700	2,950	20	8,800	1,155	1,171	134	10.500		98,700		810	
ts feet .L.	Lower	544.0	536.0	528.0	517.2	476.5	469.6	459.1	931.2	429.0	1 293 2	1 C O C	0.288	577.5	706.3	482.8	937.6	743.5	585.0	578.2	440.0	1.227.3	1,270.3	602.1	1 173 5	728.0	690.0	976.0		1,214.3	836.0	810.0	750.0	799.0	458.0	735.4	652.8	972.0		1,296.9		830.5	
Elev limits feet M.S.L.	Upper	545.1	537.1	529.1	518.2	481.5	470.1	459.6	941 1	429.0	1 295 7	0 109	694.2	579.0	710.9	483.0	941.1	746.8	760.0	581.9	440.0	1,230.3	1274.4	608.5	1 174 0	780.0	728.0	981.0		1,218.3	890.0	836.0	750.0	801.0	459.0	738.7	656.8	981.0		1,300.9		52.4 1,017.0	
Storage	AF	12.1	7.5	11.0	55.0	2.8	8.6	8 4	119.3		300.5	9 6	5.0	2.7	0	0.7	23.9	452.0	337.4	0.3	0.0	40.4	52.4	3.4	1 810 0	1,670.0	72.0	2, 25, 20		37.5	286.0	90.0	0.0	17.4	1.0	7.4	1.	78.6		98.7		52.4	
Project pur-	pose ²	Z	z	z	z	z	z	z	, L	ż	z	: 2	z	HNP	z	z	F.	Z	L	z	z	z	z	: z	Ā	<u>.</u> ц	. ~	, E)	z	ш		z	z	z	z	z	E C		z	nd Division	L	
Orocan 1	O COCO	Mississippi R	Mississippi R	Mississippi R	Mississippi R	Mississippi R	Mississippi R	Mississippi R	Minnesota R	Illinois B	R Hope	Fox B	Eox B	Chicago San Ship Canal	Fox R	Illinois R	Minnesota R	Fox R	Genesee R	Calumet	Illinois R	Pine R	Mississippi R	Fox R	Red – ake R	Des Monies B	2			Sandy R	Des Moines R		Mississippi R	Mississippi R	Illinois R	Fox R	Fox R	Bois De Souix		Mississippi R	New England Division	West R	
State/county	Otato Coality	IL Rock Island	IL Mercer	IL Henderson	IA Lake	MO Lewis	IL Adams	MO Polke	MN Chippewa Swift	Brown	MN Cass	W Brown	WI Outagamie		WI Outagamie	IL LaSalle	MN Swift, Lacqui, Parle	WI Winnebago	NY Livingston	IL Cook	IL Peoria	MN Crow Wing	MN Itasca	WI Outagamie	MN Clearwater	IA Marion		MN Traverse	SD Roberts.	MN Aitkin	IA Polk		MN Hennepin	MN Hennepin	IL LaSalle	WI Outagamie	WI Outagamie	MN Traverse	SD Roberts.	MN Cass Itasca		VT Windham	
Lomor	בסופת ומוופ	L&D 16		L&D 18	L&D 19	L&D 20	L&D 21	&D 22	Lac dui Parle Dam & Res	l agrande I &D	Leech Lake Dam & Res	Table Karkarba I &D	Little Chute I &D	Lockbort Lock	Lower Appleton L&D	Marseilles Lk & Dam	Marsh Lake Dam & Res	Menasha Dam Lk Winnebago	Mount Morris Dam	O'Brien L&D	Peoria L&D	Pine Dam & Res	Pokedama Dam & Res	Rapid Croche L&D	Red Lake Dam & Res	Red Bock Dam & Res		Reservation Control Res		Sandy Lake Dam & Res	Saylorville Dam & Res		St Anthony Falls Lwr L&D	St Anthony Falls Upr L&D	Starved Rock L&D	Upper Appleton L&D	Upper Kaukauna L&D	White Rock Dam & Res		Winnibigoshish Dam & Res		Ball Mountain Lk VT Windham West R F	

Barre Falls Dam	MA Worcester	Ware R	шш	24.0	807.0	761.0	1,400	00	PL 78–228. PL 75–761.
Black Rock Lk	CT Litchfield	Branch Brook	LL L	8.5	520.0	437.0	190	27	PL 86–45.
Biackwater Dam	MA Wordston	Diackwater R		0.04	200.0	0.00	3,280	0 0	
Colebrook River Lk	CT Litchfield	West Branch	LL	50.2	761.0	708.0	1,185	750	
	MA Bekshire	Farmington R.					. !		
Conant Brook Dam	MA Hampden	Conant Brook	டப	3.7	757.0	694.0	158	0	PL 86–645. Pl 77 228
במאן סוווווופוס בע	ter.	Culliebaug N	L	23.3	0.550	032.0	2,300	200	FL //-220.
Edward MacDowell Lk	NH Hillsboro	Nubanusit Brook	ш	12.8	946.0	911.0	840	165	
Everett Lk	NH Hillsboro, Merrimack	Piscataquog R	L	91.5	418.0	340.0	2,900	130	PL 75–761.
Franklin Falls Dam	NH Belknap, Merrimack	Pemigewasset R	ш	150.6	389.0	307.0	2,800	440	PL 75-111.
Hancock Brook Lk	CT Litchfield	Hancock Brook	L	3.9	484.0	460.0	266	40	PL 86-645.
Hodges Village Dam	MA Worcester	French R	L	13.3	201.0	465.5	740	0	
Hop Brook Lk	CT New Haven	Hop Brook	L 1	6.9	364.0	310.0	270	51	
Hopkinton Lk	NH Merrimack	Contoocook R	L	70.1	416.0	380.0	3,700	220	
Knightville Dam	MA Hampshire	Westfield R	ш.	49.0	610.0	480.0	960	0 22	PL 75–761.
	shire	Middle Di, Westileid R		73.0	0.076	0.0	2	6/2	r L 63-300.
Mansfield Hollow Lk	CT Tolland	Natchaug R	ш	49.2	257.0	205.5	1.880	200	PL 77-228.
New Bedford-Fairbaven Hurr Barrier	MA Bristol	000000000000000000000000000000000000000	. ц	0	0	000			<u> </u>
North Hartland Lk	VT Windsor	Ottauquechee R	. ш	8.89	546.5	425.0	1.100	215	. 교
North Sprinafield Lk	VT Windsor	Black R	. LL	50.0	545.5	467.0	1.200	100	4
Northfield Br Lk	CT Litchfield	Northfield Br	ш	2.4	929	500.0	. 67	7	
Otter Br Lk	NH Cheshire	Otter Brook	ш	17.6	781.0	701.0	374	20	
Stamford Hurr Barrier	CT Fairfield		ш	0.0	0.0	0.0	0	0	
Surry Mountain Lk	NH Cheshire	Ashuelot R	ш	31.7	550.0	500.0	970	260	
Thomaston Dam	CT Litchfield	Naugatuck R	L	45.0	494.0	380.0	096	0	PL 78-534.
Townshend Lk	VT Windham	West R	L	32.9	553.0	478.0	735	92	
Tully Lk	MA Worcester	East Br Tully R	L 1	20.5	0.899	636.0	1,130	78	
Union Village Dam	VT Orange	Ompompanoosuc R	L 1	38.0	264.0	420.0	740	0	PL 74-738.
West Hill Dam	MA Worcester	West R	ш.	12.4	264.0	234.0	1,025	0 0	PL 78–534.
West Induspon Westville Lake	MA Worcester	Quinebaug R	LIL	11.0	572.0	525.0	913	23	
		North Paci	North Pacific Division						
Albeni Falls Dam 1k Pend Oreile	ID Bonner	Pend Oreille R	dNP	1 155.0	2 062 5	2 049 7	95,000	86 000	PI 81–516
Applegate Lk	OR Jackson	Applegate R	H.	75.2	1,987.0	1,854.0	988	221	ĭ
									PL 87-874.
Big Cliff Dam	OR Marion, Linn	N Santiam R	<u>_</u>	3.5	1,206.0	1,182.0	130	86	HD 544, PL 75-761, PL 87-874
Blue River Lk	OR Lane	Blue R	ш	6.5	1.357.0	1.350.0	975	940	HD 531.
			Z.	78.8	1,350.0	1,180.0	940	133	PL 81-516.
Bonneville L&D Lk	_	Columbia R	٩	138.0	77.0	70.0	20,800	19,850	
Chena River Lakes	AK North Star Burough	Chena R	LL (34.0	506.7	490.0	5,400	400	
Chief Joseph Dam Rufus Woods LK	WA Douglas, Okanogan		Lμ	192.3 29.8	956.0	930.0	4 155	6,800	
Cougar Lk	OR Lane	South FK		11.3	1,699.0	1,690.0	1,280	1,235	HD 531.

APPENDIX E TO §222.5—LIST OF PROJECTS—Continued

			Project pur-	Storage	Elev limits feet	ts feet	Area in acres	acres	
Project name¹	State/county	Stream ¹	pose 2	1,000 AF	Upper	Lower	Upper	Lower	Auth legis ³
			FNPI	143.9	1,690.0	1,532.0	1,235	635	PL 81–516.
			_	6.6	1,532.0	1,516.0	635	602	PL 83-870.
Detroit Lk	OR Marion	North Santiam		19.1	1,569.0	1,563.0	3,490	3,455	HD 544, PL 75-761.
			FNPI	281.6	1,563.5	1,450.0	3,455	1,725	
			۵	40.3	1,450.0	1,425.0	1,725	1,415	
Dexter Dam	OR Lane	Middle Fk. Willamette R	FNPI	4.8	695.0	0.069	066	940	HD 544. PL 75-761.
Dorena Lk	OR Lane	Cow R	ш	5.5	835.0	832.0	1.885	1.815	HD 544.
			Z	65.0	832.0	770.5	1 815	520	PI 75-761
Dworehak Dam and Res	ID Cleanwater	North Ek Cleanwater B	a N	2.016.0	1 600 0	1 445.0	17,000	0 0 0	HD 403 DI 87-874
Dwolshan Dam and I've	D Clearwater	Foll Cr		7,0	0.000	0.00	200,7	7,000	
rall of Dam and LK	OR Lane	rall C	∟ į́	C: 10	0.450	930.0	000,	09/,1	
			Z	107.5	830.0	7.28.0	1,760	460	
Fern Ridge Lk	OR Lane	Long Tom R	ட	15.7	375.1	373.5	10,305	9,340	
			IZ.	93.9	373.5	353.0	9,340	1,515	
Foster Lake	OR Linn	South Santiam R	ш	4.9	641.0	637.0	1,260	1,195	HD 544
			FNPI	24.9	637.0	613.0	1,195	895	PL 86–645
Green Peter Lk	OR Linn	Middle Fk. Santiam R		18.3	1.015.0	1.010.0	3.705	3.605	
	,	5	I I	2499	1 010 0	0 666	3,605	2,020	
Hills Crook I k	OP I app	Middle FV Willemete P	ц	1	7 7 7 9 0	1 571 0	2,850	2,5	
TIES CLOSE EN	On Laile	Middle FA, Williamette FA	<u> </u>	0.00	1,015.0	0.140, 1	2,630	4,710	
				0.4.0	0.140	0.044,7	7,710	0,0,1	
Howard Hanson Dam	wa King	Green K	⊥ i	80.0	1,206.0	1,141.0	1,750	763	HD 531.
			Y.	25.6	1,141.0	1,040.0	763	13	PL 81-516.
Ice Harbor Dam Lk Sacajawea	WA Walla, Walla, Frank-	Snake R		24.9	440.0	437.0	8,370	8,210	HD 704, PL 79-14.
	<u>ci</u>		_						
John Day Dam Lk Umatilla	OR Sherman	OR Sherman Columbia R	_	158.0	268.0	265.0	25,000	52,000	HD 531.
			FNP	150.0	265.0	262.0	52,000	49,000	PL 81-516.
			ш	192.0	262.0	257.0	49,000	42,000	
Libby Dam Lk Koocanusa	MT Lincoln	Kootenai R		4,979.5	2,459.0	2,287.0	46,365	14,391	HD 531, PL 81-516.
Little Goose L&D Lk Bryan	WA Columbia, Whitman	Snake R	PN	49.0	638.0	633.0	10,030	9,620	HD 704, PL 79-14.
Lookout Point Lk	OR Lane	Middle Fk, Willamette R		12.2	825.0	819.0	2,090	1,860	
			FNPI	324.2	926.0	825.0	4,255	2,090	
Lost Creek Lk	OR Jackson	Rodue R	FPIR	315.0	1.872.0	1.751.0	3,430	1.800	HD 566. PL 87-874.
Lower Granite I &D	WA Garfield Whitman	Snake R	IdN	43.6	738.0	733.0	8 900	8 540	
Licky Peak Dam and I k	ID Ada	Boise R	_	13.9	3 060 0	3 055 0	2817	2 745	
	i i		. 1	264 4	3 055 0	2 905 0	2817	802	
I wr Monimental I &D I k HG West	WA Walla Walla Frank-	Spake B	_	2000	540.0	537.0	200	6 550	HD 704 PI 79-14
באו ואטומווופווגמו באם בא חס עיפט		Olland in		2.0.0	2	5	5	200	10,1,11,101,1
McNary L&D, Dam Lk Wallula	WA Benton	Columbia R	AN.	185.0	340.0	335.0	38,800	36,000	36,000 HD 704, PL 79–14.
	OR Umatilla								
Mill Creek Dam Lk	WA Walla, Walla	Mill Cr	L	7.5	1,265.0	1,205.0	225	23	HD 578, PL 75-761.
Mud Mountain Dam	WA King, Pierce	White R		106.3	1,215.0	895.0	963	0	PL 74-738.
The Dalles L&D Lk Celilo	WA Klickitat	Columbia R		52.5	160.0	155.0	11,200	10,350	10,350 HD 531, PL 81-516.
	OR Wasco								
Willow Creek Lk	OR Morrow		ш	11.6	11.6 2,113.5 2,047.0	2,047.0	269	96	96 PL 89-298.

Wynoochee Dam and Lk	WA Grays, Harbor	Wynoochee R	FMCA	65.4	800.0	700.0	1,170	193	193 HD 601, PL 93–251.
		Ohio Rive	Ohio River Division						
Allegheny L&D 2	PA AlleghenyPA Allegheny Westmore-	Allegheny R	zzz	0.0	721.0 734.5 745.0	710.0 721.0 734.5	000	000	RHA 1935. RHA 1935. RHA 1912.
Allegheny L&D 5	PA Armstrong	Allegheny R	zz	0.0	756.8	745.0	00	00	RHA 1912 RHA 1912.
Allegheny L&D 7			ZZ	0.0	782.1	769.0	0 0	00	RHA 1912.
Allegheny I &D 9	PA Armstrond	Allegheny R	zz	0.0	822.0	800.0	0 0	00	
Allegheny Res Kinzua Dam	PA Warren	Allegheny R	14. U	607.0	1,365.0	1,328.0	21,180	12,080	PL 74–738.
Alum Cr Lk	OH Delaware	Alum Cr	F F	53.1	901.0	888.0	4,852	3,387	PL 87–874.
Atwood Lk	OH Tuscarawas	Indian Fk Cr	FMCR	79.2 26.1	941.0	928.0	2,460	3,105	PW 1933.
Barkley Dam Lk Barkley	Ky Lyon, Livgst	Cumberland R	Σ. X	7.6 1,213.0	928.0 375.0	922.5 359.0	1,540 93,430	1,250	PL 79–525.
			ᇤᅩ	259.0	359.0	354.0	57,920 45,210	45,210 0	
Barren River Lk	KY Allen, Barren	Barren R	L.	558.8	290.0	552.0	20,150	10,000	PL 75–261.
Beach City Lk	OH Tuscarawas	Sugar Cr	FMR F	190.3	552.0 976.5	525.0 948.0	10,000	4,340	PW 1933.
	900	, i	FCR	0.0	0.0	0.0	0 7	420	
Deecil Th Lh	WV Waylie	Deac:	FCR	20.3	592.0	583.5	725	460	FL 8/-8/4.
Belleville L&D	WV Wood	Ohio R	, , , z	0.0	582.0	260.0	0	0	RHA 1909.
Berlin Lk	OH Mahoning, Portage	Mahoning R	L	38.3	1,032.0	1,024.7	5,500	3,590	PL 75–761.
Bluestone I k	WV Summers	Z Wel	FMCAR F	592.6	1,024.7	1,016.5	3,590	2,200	PL 74-738.
£	ŀ	-	FCR	7.5	1,410.0	1,406.0	2,040	1,800	
Brookville I k	On Stark, Luscarawas	F Fork of Whitewater R	FMR	128.4	262.0	713.0	5,200	2 430	
Buckhorn Lk	KY Leslie	Middle Fk of Kentucky R	<u>ш</u> (135.8	840.0	782.0	3,610	1,230	
Burnsville Lk	WV Braxton	L Kanawha R	ᅩᄔ	51.5	825.0	789.0	1,902	965	PL 75–761.
			FCAR	10.2	789.0	776.0	965	553	
CJ Brown Dam & ResCM Harden Lk	OH Clark IN Parke	Buck Cr Raccoon Cr	L L	26.8	1,023.0	1,012.0	3,910	2,120	PL 87–874. PL 75–761
			FAR	33.1	661.0	640.0	2,060	1,100	
lesal Of LK	Valien	Caesal Cl	FMAR	88.7	849.0	800.0	2,830	700	PL /3-/01.
Cagles Mill Lk	IN Putman	Mill Cr	ш 2	201.0	704.0	636.0	4,840	1,400	PL 75–761.
anneiton L&D	IN Perry	Chio K	z	0:0	383.0	358.0	0 :	0	KHA 1909
Carr Fk Lk	KY Knott	Carr Cr	F FAR	25.1 10.8	1,055.0	1027.0	1,120	710	PL 87–874.

APPENDIX E TO § 222.5—LIST OF PROJECTS—Continued

1 cmca toojing	Otorioo) otor	Otroca	Project pur-	Storage	Elev limits feet M.S.L.	its feet .L.	Area in acres	acres	6 ciscol day.
	State/County	Oledii .	pose ²	AF.	Upper	Lower	Upper	Lower	sign link
Cave Run Lk	KY Rowan	Licking R	F 0	391.5	765.0	730.0	14,870	8,270	PL 74–738
Center Hill Lk	TN Dekalb	Caney FK	۲ ۲ ۲ ۱۲ ۱	762.0	685.0	648.0	23,060	18,220	PL 75–761.
Charles Mill Lk	OH Ashland	Black Fk	Δщ	492.0 80.6	1.020.0	618.0	18,220	14,590	PW 1933.
Cheatham 1 & D	TN Cheatham	Climberland R	FCR	4.5	997.0	993.0	1,350	827	RHA 1946 PI 396
			. z	84.2	382.0	345.0	5,630	0	PL 396.
Clendening Lk	OH Harrison	Brush Fk	FCR	27.5	910.5	898.0	2,620	1,800	PW 1933.
Conemaugh River Lk	PA Indiana, Westmore-	Conemaugh R	ш	270.0	975.0	880.0	6,820	300	PL 74–738, PL 75–761.
Cordell Hull Dam & Res	TN Smith	Cumberland R	A S	17.8	504.5	499.0	12,200	9,820	RHA 1946.
Crooked Cr Lk	PA Armstrong	Crooked Cr	Ž L	89.4	920.0	840.0	1,940	320	
Dale Hollow Lk	TN Clay	Obey R	ĿС	353.0	663.0	651.0	30,990	27,700	PL 75–761.
Dashields L&D	PA Allegheny	Ohio R	ιz	0.0	651.0	682.0	00,,72	088,12	RHA 1909.
Deer Cr Lk	OH Pickaway	Deer Cr	ا ۲۲	81.5	844.0	810.0	4,046	1,277	PL 75–761.
Delaware Lk	OH Delaware	Olentandy R	۲ ک ۱ لد	118.0	947.0	915.0	8,550	1.270	PL 75–761
			FCAR	5.6	915.0	910.0	1,270	920	
Dewey Lk	KY Floyd	Johns Cr	Н Н О	76.1	686.0	650.0	3,340	1,100	PL 75–761
Dillon Lk	OH Muskingum	Licking R	L	256.5	790.0	737.0	10,280	1,560	PL 75–761.
		,	FCR	4.4	737.0	734.0	1,560	1,330	
Dover Dam F Br Clarion River I ake	OH Tuscarawas	Tuscarawas R	டட	203.0	916.0	1 670.0	10,100	1,160	PW 1933. PI 78–526
			FCAR	19.8	1,670.0	1,651.0	1,160	920	
E Fk Res Wm H Harsha Lk	OH Clermont	E Fk Little Miami R	ШÜ	202.2	795.0	733.0	4,600	2,160	PL 75–761.
East Lynn Lk	WV Wavne	E Fk Twelvepole	F F	65.3	701.0	662.0	2,351	1.005	PL 75–761.
			FCR	5.5	662.0	656.0	1,005	823	
Emsworth L&D	PA Allegheny	Ohio R	z	0.0	710.0	692.0	0	0	RHA 1909.
Fishtrap Lk	KY Pike	Levisa Fk	ا ا لك	126.7	825.0	757.0	2,681	1,131	PL 75–761.
	WW/ Macon	م دنون	L CAR	27.2	757.0	725.0	1,131	999	DUA 1025
Call Coll S FRD	OH Gallia	2	Z	2.	0.000	2	> ;	> :	1900.
Grayson Lk	KY Carter	L Sandy R	L	9.68	681.0	645.0	3,633	1,509	PL 86-645.
		(FCAR	10.7	645.0	637.0	1,509	1,159	
Green K L&U 1	KY Henderson	Green R	 Z	0.0	349.1	337.3	5 0	5 0	KHA 1888.
Green River Lk	KY Taylor	Green R	ZΨ	479.1	713.0	675.0	19.100	8.210	RHA 1888. PL 75–761.
			FAR	81.5		664.0	8,210	6,650	

Greenup L&D 3	KY Greenup	Ohio R		0.0	515.0	485.0	0	0	RHA 1909.
Hannibal L&D	WV Wetzel	Ohio R	z	0.0	623.0	602.0	0	0	RHA 1909.
	OH Monroe)	_ :	-			' !	'	
Hildebrand L&D	WV Monongalia	Monongahela	z	0.0	835.0	814.0	0	0	RHA 1950.
Huntington Lk	IN Hunt	Wabash R	шl	140.6	798.0	749.0	2,900	006	PL 85-500.
		i	¥ 1	8.4	749.0	737.0	006	200	
J Percy Priest Dam & Res	IN Davidson	Stones R	_ f	252.0	504.5	490.5	22,720	14,400	PL /5-/61.
			T (15.0	490.5	489.5	14,400	14,000	
			Α	0.0	489.5	483.0	14,000	11,630	
			۲ ا	0.0	483.0	480.0	059,11	0,5,01	
JW Flannagan Dam & Res	VA Dickenson	Pound R	ı, i	78.6	1,446.0	1,396.0	2,098	1,143	PL 75–761.
	:		۲ کا کا	0.01	0.085,1	1,380.0	541,1	010	
Kentucky R L&D 1	KY Carroll	Kentucky R	zi	0.0	430.0	421.8	0 0	0	RHA 1879.
Kentucky K L&D Z	KY Henry Owen	Kentucky K	zi	0.0	444.0	430.0	0	0	KHA 1879.
Kentucky R L&D 3	KY Henry Owen	Kentucky R	z	0.0	457.1	444.0	0	0	RHA 1879.
Kentucky R L&D 4	KY Franklin	Kentucky R	z	0.0	470.4	457.1	0	0	RHA 1879.
Laurel River Lk	KY Laurel, Whitley	Laurel R		185.0	1,018.5	982.0	090'9	4,200	
			~	250.6	982.0	760.0	4,200	0	
Leesvillie Lake	OH Carroll	McGuire Cr	ш	17.9	977.5	963.0	1,470	1,000	PW 1933.
			FCR	2.5	963.0	957.0	1,000	829	
London L&D	WV Kanawha	Kanawha R	z	0.0	614.0	290.0	0	0	RHA 1930.
Loyalhanna Lk	PA Westmoreland	Loyalhanna Cr	ш	93.3	975.0	910.0	3,280	210	PL 74–738.
			5	0.0	0.0	0.0	0	0	
M J Kirwan Dam & Res	OH Portage	W. Br Mahoning R	ш	22.0	993.0	985.5	3.240	2.650	
			FCAR	52.9	985.5	951.0	2,650	220	
Mahoning Cr Lk	PA Armstrong	Mahoning Cr	ш	64.7	1.162.0	1.098.0	2,370	280	
i))	0))	FRC	5.1	1,098.0	1.075.0	280	170	
Markland L&D	IN Switzerland	Ohio R	z	0.0	455.0	420.0	0	0	
	KY Gallatin			:		!	1	•	
Marmet L&D	WV Kanawha R	Kanawha	z	0.0	590.0	566.0	0	0	RHA 1930.
Martins Fk Lk	KY Harlan	Martins Fk of Clover R	· L	14.3	1.341.0	1.310.0	578	340	PL 89–298.
			FAR	3.	1.310.0	1,300.0	340	274	
			· ·	3.7	1 300 0	1 265 0	274	i	
Maxwell I 8.D	DA Favette Washington	Monogodo D	. =		763.0	743.5	i	0 0	PHA 1909
McAlpine I &D	KY lefferson	Ohio R	2 2	0.0	420.0	383.0	0 0	0 0	RHA 1909.
	N Clark	,)	•	2	2		•	•	
Meldahi L&D	KY Bracken	Ohio R	z	0.0	485.0	455.0	0	0	RHA 1909.
	OH Clermont								
Mississinewa Lk	IN Miami	MIssissinewa R	ш	293.2	779.0	737.0	12,830	3,180	PL 85–500.
			FR	51.9	737.0	712.0	3,180	1,280	
Mohawk Dam	OH Coshocton	Walhonding R		285.0	890.0	799.2	7.950	0	PW 1933.
Mohicanville Dam	OH Ashland	Lk Fork	ш	102.0	963.0	932.0	8,800	С	PW 1933.
Monongahela R L&D 2	PA Alleghenv	Monongahela R		0.0	718.7	710.0	0	0	RHA 1902.
Monongahela R L&D 3	PA Alleghený	Monongahela R	z	0.0	726.9	718.7	С	С	RHA 1905
Monongahela R L&R 4	PA Washington West-	Monongahela R		0.0	743.5	726.9	0	0	RHA 1909.
	moreland.	•					•		
Monongahela R L&D 7	PA Greene, Fayette	Monongahela R	z	0.0	778.0	763.0	0	0	RHA 1922.
Monongahela R L&D 8	PA Greene, Fayette		z	0.0	797.0	778.0	0	0	RHA 1922, 1950, 1973.
Monroe Lk	_	Salt Cr	_	258.8	226.0	538.0	18,450	10,750	FCA 1958.

APPENDIX E TO §222.5—LIST OF PROJECTS—Continued

				0,000	Elev limits feet	ts feet	Area in acres	acres	
State	State/county	Stream 1	Project pur-	1,000 1,000	M.S				Auth legis 3
	,		pose	AF	Upper	Lower	Upper	Lower	•
Ş	20,000	<u> </u>	FMA	159.9	538.0	515.0	10,750	3,280	0000 1000
onor	WV Monongalia		0.0	814.0	797.0	0.4.3	00	RHA	.808.
ă din	OH Trumbull	Mosquito Cr	ш	21.7	904.0	901.4	8,900	7,850	PL 75–761.
Š	,	O pricely of Moreina	FMCAR	80.4	7	899.9	7,850	7,220	07 074
 Se ₹	VA Wise	N Fk Pound R		8.0		1,611.0	349	154	
0	W// Hancock	a cido	FMCR	1.3	`	1,601.0	154	106	
effers	OH Jefferson	2 6	2 ;	9 6	2 0	2 0)	O	
ander rrick	KY Henderson	Onio K	z	0.0	328.0	342.0	o	0	KHA 1909.
E OE	KY Edmonson	Nolin R	т <u>п</u>	439.2	560.0	515.0	14,530	5,790	PL 75–761.
Cra	KY McCracken	Ohio R	źz	0.0	302.0	290.0	0	7,00	RHA 1909, 1910, 1918.
ssac	IL MassacKY Ballard	Ohio R	z	0.0	290.0	276.6	0	0	RHA 1909, 1910, 1918.
aski avidso	IL PulaskiTN Davidson Sumner	Cumberland R	<u>a</u>	63.0	445.0	442.0	22,500	19,550	RHA 1946.
!	11111		zz	357.0	442.0	375.0	19,550	0 0	0.00
nono Tese	WV Mononganera	Mononganela R	ZΨ	124.7	827.0	798.0	4.761	1 190	KHA 1950. Pl 75–761
- S	5	5	FMCAR	11.4	798.0	787.5	1,190	170	
hnsor	KY Johnson	Paint Cr	F 0	32.8	731.0	709.0	1,867	1,139	PL 89–298.
Bois	IN DuBois	Patoka R	Ę L	121.1	548.0	536.0	11,300	8,880	PL 89–298.
			FMCAR	167.3	536.0	206.0	8,880	2,010	
arrisc	OH Harrison	Stillwater Cr	FCR	32.2 8.6	924.6	913.0	3,170	2,310	PW 1933.
hio.	WV Ohio	Ohio R	z	0.0	644.0	623.0	0	0	RHA 1909.
shlar	OH Ashland	Clear Fk	ш	74.2	1,065.0	1,020.0	2,600	820	PW 1933.
			FCR	5.5	1,020.0	1,012.5	820	627	
ingo	WV Mingo, Wyoming	Guyandot R	F FOAR	169.5	1,155.0	1,035.0	2,850	630	PL 87–874.
aso	WV Mason	Ohio R	Ž	0.0	560.0	538.0	0	-	RHA 1909.
eig	OH Meigs								
on,	Breckinridge	Rough R	Ę L Î	214.4	524.0	495.0	10,260	5,100	PL 75–761.
: 6	Ridge IN Wabash	Salamonie R	E IL	202.9	793.0	755.0	9.340	2, 180	PL 85-500.
			T.	47.6	755.0	730.0	2,860	926	
neri	OH Guernsey	Seneca Fk	FCR	45.1 12.8	842.5	832.2	5,170	3,550	PW 1933.

.761. 909. 761.	PL 75–761. PW 1933. PL 74–738. PL 75–761.	534. 934. 874.	909. 909. 909.	935.	962. 338.		525. 525. :228.	.253.	525. 14. 14	.14. 534. 3317. 525.
PL 75–761 RHA 1909. PL 75–761							PL 79–525 PL 79–525 PL 77–228	PL 88–253	PL 79–525. PL 79–14.	
3,560 1,910 0	2,350 2,350 1,960 480	1,740 620 620	183 0	35,820 50,250	325 325 100 2,840 2,300		3,883 7,945 11,862	3,251 13,942 6,658	5,740 38,542 22,442	2,196 2,196 5,210 71,100 45,000 7,500 8,500
3,560	2,790 1,520 3,100 2,350 777	1,192 664 3,430 1,740	557	0 0 50,250 63,530	325 325 3,570 2,840		4,359 8,655 19,201	11,862 31,811 13,942	6,700 47,182 38,542	3,275 5,930 78,500 71,100 8,500 9,400
896.0 885.0 302.0	1,535.0 850.0 899.3 894.0	721.0 721.0 710.0 1,094.0 1,010.0	324.0 675.0 582.0 742.0	0.0 538.0 673.0	1,181.0 1,162.5 1,439.0 1,419.0		189.5 135.5 840.0	800.0 216.0 202.0	408.0 1,071.0 1,035.0	32.0 32.0 330.0 312.0 30.0 162.5
919.0 896.0 324.0	1,652.0 925.0 909.0 899.3	740.0 721.0 1,167.0 1,094.0	342.0 702.0 602.0 779.0	0.0 566.0 723.0	1,209.0 1,181.0 1,470.0 1,439.0		190.5 136.5 860.0	840.0 240.0 216.0	414.0 1,085.0 1,071.0	335.0 335.0 335.0 335.0 32.5 163.5
29.9	161.8 60.0 26.5 11.4	5.8 178.1 99.9 47.6	9.0 0.0 0.0 0.0	0.0 0.0 2,142.0 2,094.0	15.0 5.0 99.5 149.3		3.9 7.6 302.6	284.6 538.4 140.4	37.0 598.8 1,087.6	390.0 14.045.0 19.9 19.9
PA Mercer Shenango R FCAR KY Livingston Ohio R N IL Popel N N MV Nicholass Gaulev R F	Elk R L Stillwater Cr	OH Athens E Br Sandy Cr FRM WV Taylor Tygart R FMACR PA Erie French Cr FRM F FMACR		Kanawha RCumberland R	d	South Atlantic Division	MS Monroe	Haw R	MS Tishomingo	
Shenango River Lk PA Me Smithland L&D IL Pop Summersville Lk WV NI		ak, Lk	Willow Island L&D Willow Island L&D Willow Island L&D WW Pl Willow Island L&D OH WE Willow Island L&D OH WO	and	Woodcock Cr Lk		Aberdeen L&D and Res	B Everett Jordan Dam & Lk NC Ch	Bay Springs Lock Dam & Res	4 8 8 4 8 4 8 4 8 4 8 4 8 4 8 4 8 4 8 4

APPENDIX E TO §222.5—LIST OF PROJECTS—Continued

17	Aum legis	PL 89–298.	PL 79–14.	70 626	FL /9-525.	L 81–516.		PL 60-317.	PL 77–675.	PL 79-14.	PL 78–534.		PL 60-168. PI 71-520 PI 75-392	PL 79-14, PL 80-858,	PL 83-780, PL 90.	PL 79–525.	PL 79–14.	PL 87–874.		PL 78–534.		PL 89–789.	DI 79-14	FL /3-14. PI 77-675	PI 80-858		PL 80–858.	PL 83-780.	PL 80–858.	PL 83-780.	PL 60-317.	L 79–526.		PL 81–516.		PL 87-874.	L 60–317.				
acres	Lower	11,310 P			000,17								326,000				2,615 P				16,160 P					26,653 P		12.950			110,500 P		385,000 P		6,900 P	1,475 P	675	36,375 P		15,512 P	790 P
Area in acres	Upper	20,810	1,540	000	026,0	61,400	026,62	3,296	4,030	38,850	83,200	48,900	9,245	200		980	2,841	1,699	2,021	888	17,201	6,580	3,800	3,370	2,880	29,340	13 300	17,350	141,250	141,250	110,500	110,500	487,200	385,000	8,200	4,000	1,475	45,181		25,864	190
its feet	Lower	250.1	96.0	1004	108.5	0.099	625.0	186.0	24.0	76.5	300.0	268.0	10.5	2		219.5	244.5	269.5	299.5	329.5	79.0	343.0	328.0	974.0	920.0	475.0	124.0	0.4.0	17.0	14.0	14.5	13.0	10.5	9.5	94.0	1,030.0	1,000.0	184.0		620.0	122.9
Elev limits feet M.S.L.	Upper	264.0	102.0	100	0.601	0.699	0.099	187.0	27.5	77.5	320.0	300.0	17.5	?		220.5	245.5	270.5	300.5	330.5	80.0	352.0	343.0	982.0	974.0	480.0	125.0	23.0	18.3	17.0	16.6	14.5	14.5	10.5	95.5	1,075.0	1,030.0	190.0		635.0	122.9
Storage	AF AF	220.9	8.2	0	ο. ο.	293.0	1,416.0	3.3	13.0	20.0	1,281.4	0.720,1	28.7.1	2,000,1		0.0	2.7	1.6	2.0	6.0	16.7	46.5	34.3	34.2	111.2	140.0	0.021	0.4	181.9	273.2	236.3	165.0	1,661.0	465.0	9.1	112.0	33.0	244.0		306.1	0
Project pur-	pose ²	F 7	Z	2	Zι	⊥ {	Ŧ ;	J.	z!	A.	щí	ጉ :	NEW CONTRACT			z	z	z	z	z	NP	ட	RMA	ட	<u>н</u>	ır C	L	ŽZ	Ž LL	FIMC	ш	FIMC	ш	FIMC	z	ш	ΕM	NΡ		NPMAR	z
Č	offeam	Neuse R	Chattahoochee R	Tombidabo	lombigbee R	Savannan K		Black-Warrior R	Cross FL Barge Canal	Apalachicola R	Roanoke R		Central and Southern FI			Tombigbee R	Alabama R	Okatibbee Cr	Chickasawbay R	Smith R		Savannah R	Alabama D	Cross El Barge Capal	Central and Southern FI	5	Central and Southern FL		Central and Southern FL		Black-Warrior R	Yadkin R		Chattahoochee R		Chattahoochee R	Black Warrior R				
	State/county	NC Wake	AL Houston	GA Early	AL Sumter, Greene	GA Hart	SC Anderson	AL luscaloosa	FL Levy, Marion, Citrus	FL Gadsden, Jackson	VA Mecklenburg		AL TUSCAIOOSA	Hendry, Palm Beach,	Martin.	MS Monroe	MS Monroe	MS Itawamba	MS Itawamba	MS Itawamba, Prentiss	AL Wilcox	MS Lauderdale		VA Henry		GA Elbert	Al Autorida Lowades	FI Putman & Marion	FI Palm Beach	1	FL Palm Beach Broward		FL Broward & Dade		AL Hale, Greene	NC Wilkes		GA Clay	AL Henry	GA Troup	AL Tuscaloosa
	Project name	Falls Dam & Lk	G W Andrews L&D and Res	- di::::::::::::::::::::::::::::::::::::	Gainesville L&D and Res	Hartwell Dam & LK		Holf Lock Dam & Kes	Inglis Dam Lk Rousseau	Jim Woodruf L&D	John H Kerr Dam & Res		John Hollis Bankhead L&D and Res			Lock A	Lock B	Lock C	Lock D	Lock E	Millers Ferry L&D	Okatibbee Dam & Res		Philpott Dam & Lk		R B Russell Dam and Lk	Dobort E Hongy Ook Dam & Doc	Podman Dam & 1k Ocklawaha	S-10 & Water Cons Area 1		S-11 & Water Cons Area 2A		S-12 & Water Cons Area 3A		Selden Lock and Res	W Kerr Scott Dam & Res		Walter F George L&D		West Point Dam & Res	William Bacon Oliver L&D and Res

		South Paci	South Pacific Division	•	•	-				
Alamo Dam & Lk	AZ Mohave, Yuma	Bill Williams R	ш	1,046.2	1,235.0	1,174.0	13,307	7,045	PL 78–534.	
Bear Dam	CA Mariposa	Bear Cr	L	7.7	413.5	344.0	265	0	PL 78-534.	
Black Butte Lk	CA Tehama	Stony Cr	Ē	137.1	473.5	414.6	4,453	277	PL 78-534.	
Brea Dam & Res	CA Orange	Brea Cr	ш	4.0	279.0	208.0	163	0		
Buchanan Dam H.V. Eastman Lk	CA Madera	Chowchilla R	ш	42.0	287.0	229.0	1,785	1,482	PL 78–874.	
			<u>.</u>	140.0	287.0	466.0	1,785	484		
Burns Dam	CA Merced	Burns Cr	ш.	8.9	300.0	266.0	662	0	PL 78-534.	
Carbon Canyon Dam & Res	CA Orange	Carbon Cr	ш	9.9	475.0	403.0	225	0	PL 74-738.	
Coyote Valley Dam Lk Mendocino	CA Mendocino	East Fork, Russian R	ш.	20.1	764.8	737.5	1,922	1,740	PL 75–761.	
			Σ	72.3	737.5	637.0	1,740	20		
Dry Cr (Warm Springs) Lk & Channel	CA Sonoma	Dry Cr	ш	136.0	495.0	451.1	3,600	2,600	PL 87-874.	
-			MR	225.0	451.1	291.0	2,600	200		
Farmington Dam	CA San Joaquin.	Littleiohn Cr	ш	52.0	156.5	120.0	4.107	0	0 PL 78–534.	
o	Stanislaus	•					,			
Fullerton Dam & Res	CA Orange	Fullerton Cr	ш	0.8	290.0	261.0	62	C	FCA 1936.	
Hapson Dam Dos	TA Los Apados	Timing Wesh	. ц	25.4	1 080 0	0 000	781		ECA 1036	
Hidden Dam Hensley I k	CA Madera	Freeno D	. ц	1.00	0.000	185.8	1 567	2,7	DI 87_874	
				0.0	0.00	0.00	1,00,1	- 00	;	
		2	_ i	0.00	0.040.0	440.0	/00,1	780		
Isabella LK	CA Kern	Kern K		568.1	2,605.5	2,470.0	11,454	97	PL 785-34.	
Lopez Dam Res	CA Los Angeles	Pocoima Wash	ш.	4.0	1,272.9	1,253.7	40	0	FCA 1936.	
Mariposa Dam	CA Mariposa	Mariposa Cr	ш	15.0	439.5	370.0	512		PL 78–534.	
Martis Cr Lk	CA Nevada	Martis Cr	ш	19.6	5,838.0	5,780.0	762	61	PL 87-874.	
Mathews Canvon Dam & Res	NV Lincoln	Mathews Canyon	ш	6.3	5,461.0	5,420.0	300		PL 81-516.	
Mojave River Dam & Res	CA San Bernardino	Mojave R	. ц	89.7	3 134 0	2 988 0	1 978	0 0	PI 86-645	
Now Dogos 16		Colonian	. 4		710	0.000	0.00	0,00		
New nogari Lk	CA Calaveras	Calavelas R	LĪ	0.000	13.0	7.000	4,000	0,010		
1		(Ξ.	302.2	713.0	0.986	4,333	707		
Owens Dam	CA Mariposa	Owens Cr	ш.	3.6	407.5	347.0	174	0	PL 78–534.	
Painted Roc Dam & Res	AZ Maricopa	Gila R	ш	2,491.5	0.199	524.0	53,200	0	PL 81-516.	
Pine Canyon Dam & Res	NV Lincoln	Pine Canyon	ш	7.8	5,675.0	5,604.0	254	0	PL 81-516.	
Pine Flat Lk Kings R	CA Fresno	Kings R	ш	1.000.0	951.5	565.5	5.956	0	PL 78–534.	
Prado Dam & Res	CA Riverside	Santa Ana R	ш	196.2	543.0	460.0	6.630	0	FCA 1936.	
San Antonio Dam & Res	CA Los Angeles	San Antonio Cr	ш	7.7	2.238.0	2,125.0	145	C	FCA 1936.	
Santa Ea Dam & Ros	CA Los Angeles	San Gabriel B	. ц	32.1	106.0	424.0	1 084	0 0	ECA 1936 1941	
Canal o Dan & Nes		Can Cablel IX		. 77	7 1	0.000	0,0	0 0	100 1000	
Sepulveda Dalli & Nes	CA LOS Aligeies	LOS Allgeies N	_ i	- I	0.0	0.000	000		FCA 1930.	
Success LK	CA I ulare	l ule K		0.67	627.5	588.9	7,477	408	PL /8-534.	
Terminus Dam Lk Kaweah	CA Tulare	Kaweah R	<u> </u>	136.1	694.0	220.0	1,913		PL 78–534.	
Whitlow Ranch Dam & Res	AZ Pinal	Oueen Cr	ш	35.6	2.166.0	2.056.0	828	0	PL 79–526.	
Whitter Marrows Dam & Res	CA Los Angeles	San Gabriel Bio Hondo	. ц	34 0	228 5	184.0	2 411	0 0	FC 4 1936	
William Mail Ows Daill & Ness		Call Gabilet INC TOTAL		9	2.032	2	- - - -	>	.00	
		Ý.								
		Southwestern Division	ern Division							
Abiquiu Dam	NM Rio Arriba	Rio Chama	ш	572.2	6,283.5	6,220.0	7,469	4,120	4,120 PL 80–858.	
	ì		Σ ι	191.3	6,220.0	6,060.0	4,120	0 0		
Addicks Kes	TX Hill	Burralo Bayou	_ ц	400.b	112.0	537.5	16,423	3 280	3 280 PLZ50-83-Z.	
Adulla Ly		Aquilia C	 Z Z	93.6	537.5	478.6	3.280	2,500	FL 90-405.	
	_)	2		,)		

APPENDIX E TO §222.5—LIST OF PROJECTS—Continued

Č			Project pur-	Storage	Elev limits feet M.S.L.	its feet	Area in acres	acres	2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Project name	State/county	otleam	pose ²	AF AF	Upper	Lower	Upper	Lower	Aum legis
Arcadia Lk	OK Oklahoma	Deep Fork R	F	64.4	1,029.5	1,006.0	3,820	1,820	PL 91–611.
B A Steinhagen Lk	TX Taylor, Jasper	Neches R	<u></u>	24.5	83.0	81.0	_	10,950	
Bardwell Lk	TX Ellis	Waxahachie Cr	⊥ ≥	79.6	439.0	421.0 372.6	6,040 3,570	3,570	PL 86–399.
Barker Res Beaver Lk	TX Harris Ft Bend AR Carrol, Benton,	Buffalo Bayou	шш	209.0 299.6	1,130.0	73.2	16,734 31,700	28,220	HD250–83–2, RHA 1938. PL 83–780.
7 0040	washington.	0	FPM	925.1	1,120.0	1,077.0	28,220	15,540	PL 85-500.
ב ב ב ב ב ב ב ב ב ב ב ב ב ב ב ב ב ב ב	X X	H L	. ≅ ι	372.7	594.0	470.0	12,400	42	
Benbrook LK	IX larrant, Parker	Clear FK Irmity R	ΣZ	72.5	694.0	656.0	3,770	3,770	HD103-771.
Big Hill LK	KN Labette	Big HIII Cr	L i	13.1	867.5	858.0	1,520	1,240	
Birch Lk	OK Osage	Birch Cr	Σ IT Σ	39.0	774.0	814.0	1,240	1,140	HD5/2-8/-2. PL 87-874.
)		FMCAR	15.8	750.5	730.0	1,140	384	HD563-87-2.
Blue Mountain Lk	AR Yell, Logan	Petit Jean R	шш	233.3	419.0	384.0	11,000	2,910	PA 75-761.
DIONELL BOOM EN	ON INCOMITABLE	יייייייייייייייייייייייייייי	FRPMAC	469.8	599.5	559.5	14,200	9,200	7L 03-300.
Bull Shoals Lk	AR Baxter, Marion,	White R	ш	2,360.0	0.569	654.0	71,240	45,440	PL 77–228.
	MO Ozark, Taney		PF	1,003.0	654.0	628.5	45,440	33,800	
Canton Lk	OK Blain	N Canadian R	ш	265.8	1,638.0	1,615.4	15,710	7,910	PL 75–761.
-			Σ	97.2	1,615.4	1,596.5	7,910	2,710	HD56-/75-3.
Canyon Lk	TX Comal	Guadalupe R	ш 2	346.4	934.0	909.0	12,890	8,240	PL 79–14.
Clearwater Lk	MO Reynolds, Wayne	Black R	Σ ιμ	391.8	567.0	494.0	10,400	1,630	
Cochiti Lk	NM Sandoval, Sante Fe,	Rio Grande	LL	545.0	5,460.5	5,356.6	9,361	1,200	
			FRC	43.0	5,356.6	5,330.0	1,200	0	
Conchas Lk	NM San Miguel	Candian R	டம்	198.8	4,218.0	4,201.0	13,664	9,692	HD 308–74.
Copan I k	OK Washington	Canev R	- ш	184.3	732.0	710.0	13.380	2,000	PI 87-874
	KS Chautauqua		FMCA	42.8	710.0	687.5	4,850	110	HD563-87-2.
Council Grove Lk	KS Morris	Neosho R	LE Î	63.8	1,289.0	1,274.0	5,400	3,230	PL 81–516.
	000	C	T MAK	48.5	1,274.0	1,240.0	3,230	42	
DeQueen Lk	AR Sevier	Kolling Fork K	FMCRO	25.5	473.5	437.0	1.680	710	PL 85-500.
Dierks Lk	AR Sevier, Howard	Saline R	L	67.1	557.5	526.0	2,970	1,360	PL 85-500.
	2		FMCR	15.1	526.0	512.0	1,360	810	
Eldorado LK	KS Butter	wainut R	FMAR	154.0	1,347.5	1,339.0	10,740	8,000	PL 89-298. HD232-89-1
Elk City Lk KS Montgomery	KS Montgomery	EK R	ш	239.5	825.0	796.0	13,150	4,450	4,450 HD440-76-1.

44.8 796.0 764.0 4,450 64 105,480 PL 79–525.	585.0 565.0 105,480 4 987.5 948.5 10,400	582.0 554.0 51,000 19,900	2,004.0	2,004.0 1,988.0 1,820 0 5,608.0 5,496.0 2,060 0	791.0	569.0 502.0 4,680 1,370	502.0 464.5 1,370 310		560.0 535.0	535.0 451.0 7,380	1,125.0 1,115.0 8,690 0	487.0 461.0	784.0 761.5 3.700 917	761.5 55.5 917 394	1,920.0 1,900.0 1,260	437.5 404.5 34,490	404.5 390.0 13,250 4,500	765.0 733.0 13,000 3,570	31.1 /33.0 /10.0 3,5/0 0 PL 84–843. 73.0 5.232.0 5.196.1 2.877 1.370 PL 80–858		536.0 522.0 10,940 7,470	3 870 0 3 851 0	3,851.0 0.0 11,655 0	1,068.0 1,039.0	1,039.0 1,020.0 9,300 108	343 5 1 040 0 078 0 17 040 PL 87-874.	754.0 723.0 54.300 3	723.0 706.0 23,600 13,300	142.0 142.0 140 140	160.5 10,700 9,400 HD 758-79,	182.3 180.0 3,750 3,180 HD 758–79,	196.3 194.0 5,820 5,200	213.3 211.0 6,900 5,550 HD 758-79,	
FMA F	Mc	₩ ₩ ш I		Σ 4 L	L Z		FMCQ	⊥ ∑	ш	≥ ц	5	Little Red R		ΣH	ш 2	Σ ι⊥	FMCAR	ш	AMT I		Mountain Cr	Σ ш	FRC	LL	FMAR	T I	_	FNPMC	z	Arkansas R N	Arkansas R	Z Z		
OK McIntosh, Pittsburg, Candian R	KS Greenwood Fall R	OK Wagoner Neosho (Grand) R	OK Woodward Wolf Cr	NM Santa Fe Galisteo C	TX Williamson N.F. San Gabriel R	AR Howard, Polk Cossatot F		IX Williamson San Gabriel R	TX Denton, Tarrant Denton Cr	OK Affaffa		AR Cleburne, Van Buren Little Red	OK Creek Polecat Cr		TX Coleman Hords Cr	OK Choctaw Kiamichi R		OK Osage Caney R	KS ChautauguaNM Sandoval	_	TX Dalla, Ellis, Tarrant Mountain 0	CO Bent		KS Coffee Neosho R		OK Kay, Osage Arkansas I			-	_			_	AR Pulaski Arkansas K
ŏ	KS	ð	, S	Z	X	AR	Ì	×	<u>X</u>	Š	, 	AR	ð	i	XE	Hugo Lk		¥ §	Jemez Canvon Dam		X	2		John Redmond Dam & Res KS (Kaw Lk OK	Keystone I k			-		L&D 04 AR.		-&D 06, David D. Terry AR Pulaski

APPENDIX E TO §222.5—LIST OF PROJECTS—Continued

	Č	ć		Storage	Elev limits feet M.S.L.	its feet	Area in acres	acres	-
Project name	State/county	Stream	pose	1,000 AF	Upper	Lower	Upper	Lower	Auth legis ³
L&D 08, Toad Suck Ferry	AR Faulkner, Perry AR Conway	Arkansas RArkansas R	zz	8.7 15.8	265.3 287.0	263.0	4,130	3,600	RHA 1946. HD 758–79.
L&D 10, Lk Dardanelle	AR Pope Yell	Arkansas R	NP PN	72.3	338.2	336.0	34,700	31,140	HD 758-79, RHA 1946.
L&D 11, Ozark-Jetta Taylor	AR Franklin	Arkansas	NPR	25.3	372.5	370.0	11,100	8,800	RHA 1946, HD 758-79.
L&D 13, James W. Trimble	AR Sebastian, Crawford	Arkansas R	z	18.1	392.0	389.0	6,820	5,200	RHA 1946.
L&D 14, W. D. Mayo	OK Sequoyah, Leflore	Arkansas R	z i	0.0	413.0	0.0	1,600	0	PL 79–525.
L&D 15, Robert S. Kerr Res	OK Letlore, Sequoyan	Arkansas K	Ž	84.7	460.0	458.0	43,800	40,760	PL /9-525.
L&D 16, Webbers ralls ResL&D 17, Chouteau	OK Wagoner	Verdiaris R	ì Z Z	92.4	511.0	511.0	2.270	2,270	PL 79-525. PL 79-525. HD 758-79-
I.8. Newt Graham	OK Wadoner	Verdiaris R	z	0	532.0	532.0	1 490	1 490	
Lake O' The Pines	TX Marion	Cypress Cr	· L	579.5	249.5	228.5	38,200	18,700	PL 79–526.
			Σ	250.0	228.5	201.0	18,700	1,100	
Lavon Lk	TX Collin	East Fork, Trinity R	L	275.6	503.5	492.0	29,420	21,400	HD 533-78-2.
()	i i	: : : :	Σι	380.0	492.0	433.0	21,400	2,87	1
Lewisville Lk Garza-Little Elm Dam	IX Denton	EIM Fork Irinity R	⊥ ≥	525.2	532.0	515.0	39,080	23,280	HD 403-77-1.
Marion Lk	KS Marion	Cottonwood R	L	60.2	1,358.5	1,350.5	9,050	6,200	PL 81-516.
			FMAR	83.3	1,350.5	1,320.0	6,200	170	
Millwood Lk	AR Little R Hempstead	Little R	L Î	1,650.0	287.0	259.2	95,200	29,200	PL 79–526.
	1		Σ Σ	153.3	259.2	252.0	29,200	13,100	HD 785-79.
Navarro Milis Lk	I A Navarro Fill	Richiand of	LΣ	53.2	443.0	375.3	5,070	0/0,6	TU 498-83-2.
Nimrod Lk	AR Perry, Yell	Fourche La Fave R	ш	307.0	373.0	342.0	18,300	3,550	FCA 1938.
Norfork Lk	AR Baxter, Fulton	North Fork R	ட	731.8	280.0	552.0	30,700	21,990	_
	MO Ozark		<u>.</u>	707.0	552.0	510.0	21.990	12,320	_
North Fork Lk	TX Williamson	N.F. San Gabriel R	L Z	87.6	834.0	791.0	3,220	1,310	PL 87–874.
O. C. Fisher Lk	TX Tom Green	N. Concho R.)	277.2	1.938.5	1.908.0	12.700	5.440	PL 77–228.
			Σ	80.4	1,908.0	1,836.0	5,440	က	
Oologah Lk	OK Rogers	Verdigris R	шi	965.6	661.0	638.0	26,800	29,460	PL 75–761.
2 C C C C C C C C C C C C C C C C C C C	OK Toxos	O de cipaco	Z Z Z	544.1	638.0	592.0	29,460	1,120	01 74 730
Optimila En	ON Leyds	A. Calidial D	COMP	1177	2,763.5	2,705.0	2, 4	1 225	7 - 1 - 1 38.
Pat Mayse Lk	TX Lamar	Sanders Cr		64.6	460.5	451.0	7,680	5,993	Pl. 87–874
	3		FMCR	119.9	451.0	415.0	5,993	966	HD 88–71.
Pine Cr	OK McCurtain	Little R	ш	388.1	480.0	443.5	17,230	4,980	PL 85-500.
			FMAC	77.6	443.5	414.0	4,980	200	HD 170-85-1.
Proctor Lk	TX Comanche	Leon R	ш	310.1	1,197.0	1,162.0	14,010	4,610	PL 83-780, HD 535-81-
Sam Rayburn Res	Ê	Angelina R	L	1,099.4	173.0	164.4	142,700	114,500	HD 981–76–1.
	tine, Angelina.		PMC	1,446.2	164.4	149.0	149.0 114,500	74,040	

Santa Rosa		NM Guadalupe Pecos R		340.0	4,746.2	4,776.5	10,740	3,823	3,823 PL 83–780.
Sardis	OK Pushmatah	Jackfork Cr	<u> </u>	122.6	0.709	299.0	16,960	13,610	HD 602-79-2.
			FMR	274.2	299.0	542.0	13,610	40	
Somerville Lk	TX Washington, Lee, Burleson.	Yegua Cr	L	337.7	258.0	238.0	24,400	11,460	PL 83–780.
			Σ	143.9	238.0	200.0	11,460	0	
Stiatook	OK Osage	Hominy Cr	ш	178.0	729.0	714.0	13,690	10,190	10,190 HD 563-87.
	_		FMARC	311.6	714.0	0.759	10,190	1,430	
Stillhouse H. Lk	TX Bell Lampasas R	Lampasas R	L	390.6	0.999	622.0	11,830	6,430	PL 83-780.
			Σ	204.9	622.0	498.0	6,430	0	
Table Rock Lk	MO Taney, Stone, Barry	White R	L	760.0	931.0	915.0	52,250	43,070	PL 77–228.
	AR Carroll, Boone		단	1,181.50	915.0	881.0	43,070	27,300	FCA 1938.
Tenkiller Ferry Lk	OK Cherokee, Sequoyah	Illinois R	L	2929	0.799	632.0	20,800	12,900	RHA 1946.
			윤	371.0	632.0	594.5	12,900	7,370	
Texoma Lk, Denison Dam	TX Marshall	Red R	ш	2,669.0	640.0	617.0	144,000	88,000	PL 75–761.
	OK Bryan, Cook, Gray-		FPM	1,612.0	617.0	290.0	88,000	41,000	
	son.								
Toronto Lk	KS Woodson	Verdigris R	ш	179.8	931.0	901.5	11,740	2,660	HD 440-76-1.
			FMA	10.7	901.5	896.7	2,660	1,720	
Trinidad Lk	CO Las Animas	Purgatorie R	L	58.0	6,260.0	6,230.0	2,107	1,453	PL 85-500.
			Œ	20.0	6,230.0	0.0	1,453	0	
Two Rivers Dam	NM Chaves	Rio Hondo R		150.0	4,032.0	3,945.0	4,806	0	PL 83-780.
Waco Lk	TX Mclennan	Bosque R	L	3.3	200.0	455.0	19,440	7,270	7,270 PL 83-780.
			Σ	100.8	455.0	370.0	7,240	0	HD 535-81-2.
Waurika Lk	OK Jefferson	Beaver Cr	L	140.4	962.5	951.4	15,000	10,100	PL 88–253.
			FMCAR	199.7	951.4	910.0	10,100	830	
Whitney Lk	TX Hill, Bosquel	Brazos R	L	1,372.0	571.0	533.0	49,820	23,560	PL 77–228.
			PM	381.9	533.0	425.0	23,560	475	HD 390-76-1.
Wister Lk	OK Leflore	Pouteau R	L	387.0	502.5	474.6	23,070	5,000	PL 75–761.
Wright Patman Lk	TX Bowie, Cass	Sulphur R	L	2,363.7	259.5	220.0	119,700	20,300	PL 79–526.
			ΕM	142.7	220.0	180.0	20,300	0	
¹ Res—Reservoir, Lk—Lake, Div—Diversion: R—River, Cr—Creek, Fk—Fork, L&D—Lock & Dam; GIWW—Gulf Intercoastal Waterway, FG—Floodgate; CS—Control Structure: DS—Drain	version: R—River; Cr—Cree	k; Fk-Fork; L&D-Lock &	Dam; GIWW—	Gulf Interco	astal Wate	rway; FG-	-Floodgate	; CS—Co	ntrol Structure: DS-Drain-

| VEST-RESERVICE LANGE [47 FR 44544, Oct. 8, 1982, as amended at 52 FR 15804, Apr. 30, 1987; 52 FR 23816, June 25, 1987; 57 FR 35757, Aug. 11, 1992. Redesignated at 60 FR 19851, Apr. 21, 1995]